Developing Digitally-rich Urban Teacher Leaders: Fostering and Sustaining a STEM Culture of Belonging, Access, Justice, Equity, Diversity, and Inclusion (BeAJEDI)

University of Rochester
NSF Noyce MTF Project Overview 2022

- The Warner Graduate School of Education, in partnership with the College of Arts & Sciences at the University of Rochester, has been awarded a $3 million grant award from the National Science Foundation Noyce Master Teaching Fellowship. This is a five-year fellowship (October 1, 2022 - September 30, 2027) that seeks to promote **STEM education leaders (fellows) as change agents**. Selected fellows would join fellows from three previous UR Noyce MTF projects with districts in the region to affect change in STEM learning for colleagues and students.
- The intent of this project is to support the development of secondary teacher leaders to ***BeAJEDI* in STEM reform** - focusing on ***B***elonging, ***A***ccess, ***J***ustice, ***E***quity, ***D***iversity, and ***I***nclusion - while **incorporating digitally-rich practices**. In particular, we will examine and address issues of equity, diversity, and inclusion in urban settings - partnering with the Rochester City School District, Elmira City School District, Jamestown City School District, and the Rochester Museum and Science Center.
- The project will recruit a cadre of **19 certified secondary (grades 7-12) math and science teachers** from across the three partner districts for this five-year program leading to an MS in Inclusion and Special Education, along with advanced certificates in Teacher Leadership, Urban Teaching & Leadership, and Digitally-Rich Teaching and Learning in K-12 Schools.
- Tenured certified secondary (grades 7-12) teachers **who teach math and/or science at least 50% of their time** are eligible to apply to participate. **Each fellow will receive a stipend of $12,000 each year for years 2-5.** This salary stipend is meant to supplement teachers' existing salary, and the district must commit to maintaining the Fellows' base salary throughout the project period.
- As part of accepted Fellows' project commitment and professional learning, they will take graduate coursework at the UR Warner School each semester of the program. Part of this coursework includes a monthly "Leadership Seminar" offered throughout the life of the project. **Tuition will be covered 100% by the grant and the Warner School** as part of their cost-sharing effort.
- Fellows will also be **partnered with an experienced STEM teacher in their field as a mentor** to support their growth and development throughout the project.
- The program will be offered in a hybrid model, with **all academic year coursework and professional learning offered online** (to include synchronous and asynchronous learning activities) in combination with **summer multiple-day on-site immersive experiences**. Thus technology will be used both to support the learning of fellows based on "lessons learned" in

providing high-quality online professional learning AND we will support fellows' meaningful use of technology to increase STEM learning opportunities for their students and to *BeAJEDI* in STEM reform.

- Fellows will also have opportunities to work with faculty in the UR Earth and Environmental Sciences Department to engage in authentic experiences as learners using technology, both through partnered mentorship and through on-site immersive experiences in the summer.
- The Rochester Museum and Science Center (RMSC) is our community partner who will also help design and support learning experiences for fellows throughout the five years of the project. In particular, the Cumming Nature Center will be used as a site for fellows to engage in authentic learning experiences in the summer.
- The project also includes ½ day professional learning experiences for district leadership supporting participating Fellows to grow their knowledge and understanding of STEM reform, equity and inclusion issues, and digitally rich practices.
- The project will be externally evaluated to examine in what ways the project develops participating teachers' digitally-rich teaching practices, culturally sustaining pedagogical practices, and teacher leadership practices.
- **Commitments required of and made by the University of Rochester**:
    - Coordinate the recruitment of fellows' and the selection process;
    - Be responsible for designing and delivering all coursework, professional learning, and mentorship, with input and support from all partners;
    - Offer a tuition waiver for 50% of the required coursework (as an in-kind cash contribution, satisfying the minimum requirement);
    - Monitor completion of program and service requirement by all fellows, and manage repayment when needed;
    - Be responsible for the execution of the external evaluation and for reporting to NSF;
    - Contribute some additional in-kind resources (personnel time, etc.) to cover for the majority of the required match.
- **Commitments required of each of the partner districts**:
    - Take a leadership role working with the UR project team to recruit and select Fellows from their district;
    - Ensure that Fellows from their district can conduct the required coursework and professional learning activities and that each Fellow remains teaching math and/or science for at least 50% of their time;
    - Commit to maintaining the Fellows' base salary throughout the project period;
    - Provide Fellows with opportunities to put their learning into practice to support the district's efforts to improve STEM teaching practices (e.g., have fellows serve on leadership teams and decision-making committees; support fellows in engaging in coaching and/or professional learning for their colleagues in line with district initiatives);
    - Support district leadership participation in professional learning experiences for leaders;
    - Contribute information as needed for program evaluation and reporting;
    - Contribute in-kind resources (ex: administrators' time, space, substitutes, etc.) for a target of $5,000/year.
- **Commitments required of each Fellow**:
    - Fully participate in <u>all</u> activities constituting the 5-year program – including graduate coursework, leadership seminar, working with a mentor, and a 3-day on-site summer immersion experience each summer;
    - Comply with the 5-year service requirement of **teaching math and/or science for at least 50% of the time in high-need schools**. If the teaching requirement and/or project expectations are not met, the fellow will be required to pay back half of the supplementary stipend received and one quarter of the cost of all graduate coursework taken up to that point.
    - Act as a teacher leader to support the district's STEM reform efforts, aligned with project and district efforts to improve STEM teaching and learning and consistent with

the project's expectations (e.g., engage in coaching with colleagues and provide professional learning for colleagues), eventually implementing a change project in their home district;
    - Contribute information as needed for program evaluation and reporting.

Project Leadership Team:

- Cynthia Callard, PI
- Michael Daley, co-PI
- Raffaella Borasi, co-PI
- Andrea Cutt, co-PI
- John Kessler, co-PI
- Jennifer Kruger, Sr. Project Leadership
- Michael Occhino, Sr. Project Leadership
- Zenon Borys, Sr. Project Leadership
- Dave Miller
- Kim Fluet
- Melissa Staloff
- Kelly Pearson
- Eleni Duret
- Maryanne Maves