

Project Overview

Developing culturally responsive, affective-focused teachers requires continued and targeted support in one's knowledge, beliefs, and practices.

CRAFT is a hybrid two-year, graduate credit and certificate accruing program that equips Florida K-12 science and math teachers with culturally responsive, affective-focused practices and leadership skills to support STEM learning, affect, identities, and career interest for all students.

Goals

Transform practices: Equip K-12 science and mathematics teachers with culturally responsive, affective-focused practices and leadership skills to support STEM learning, affect, identities, and career interest for students who identify as Black, Indigenous, and/or People of Color (BIPOC).

Construct tools and resources: Develop open-access PD materials that support and sustain culturally responsive, affective-focused science and mathematics teaching. These materials will be created in Canvas and shared through open-access platforms including Google Classroom and the Unizin online learning consortium.

Develop a theory of change: Create an evidence-based, adaptable framework that identifies how CRAFT program experiences function to improve science and mathematics teachers' culturally responsive, affective-focused instruction.

Elementary Student's Perceptions of Who is a Scientist or Mathematician Numb Yes Maybe No

	1	26	29	
	2	25	23	
	3	36	21	
	4	51	8	
	5	47	10	
	6	44	14	
	7	9	23	
	8	18	25	
	9	33	25	
	10	23	27	
	11	16	15	
	12	16	24	

Pictures numbered 1-12 from left to right.

Culturally Responsive, Affective-Focused Teaching of Science & Mathematics (CRAFT) **College of Education** UNIVERSITY of FLORIDA Julie C. Brown, Chonika Coleman King, Corinne Manley, Ebony Terrell Shockley This project is supported by the National Science Foundation. DRL 2101277 **Development Activities STEM Empowerment Program** is an intensive 2-week **Coursework** occurs in 4 hybrid graduate courses over a two-year program for elementary and middle school students where CRAFT period: Culturally Responsive STEM Education, Instructional Coaching, Teacher Inquiry, and Teacher Leadership. teachers implement co-designed culturally responsive STEM units. academic and personal background knowledge; accumulated life experiences; Goals/Aims of Canvas work Canvas Classroom Give and receive feedback and support to colleagues. Workshop Recording, Session 3, Funds of Knowledge, (11/5 Receive a summary of relevant nformation from CRAFT. Build community within and across disciplines and grade bands. Post Workshop Reflection 🛕 🏯 📇 Affective Domain and Funds of Knowle Getting back to affective development Share what you learned, what you Upload Assessment Items + Reflection ick Reference Guides for Science and Math what you want to learn. Review content from previous things I do outside of class Module 2. Funds of Knowledge and Affective Development, Part 1 (11/9) workshops Affective Domain Quick Reference Guides rel 4 - l can share an example of how n my world (for me or my friends, family, and/or commu Level 3 - I can identify my own examples of ways in whi luable in the real world or for my learning in other areas aluable in the real world or for my learning in other area **Teacher Inquiry** occurs in the 2nd year. Teachers investigate and address an area of inequity in their classrooms. They share their findings with colleagues and administrators across our partner district.









Preliminary analysis of elementary student interview data revealed trends in student's perceptions of who is a scientist and/or mathematician. Factors such as clothing attire played a role in student's positively categorizing an individual as a scientist/mathematician.



Findings







Teacher Leadership Teachers examine their roles as change agents at the school level and investigate how these roles translate into their continued professional growth as culturally responsive, affective-focused educators.

Ten Roles for Teacher Leaders

Resource Provider Instructional Specialist

- Curriculum Specialist Classroom Supporte
- Learning Facilitator Mentor
- School Leader
- Data Coach
- 10. Learner



Secondary Students' Responses to Career Interest Survey (CIS) and Science/Math Values Inventories (SVI, MVI)













Subscale - General Utility - Interest Need for High Achieveme Personal Cost

Preliminary summary data for CIS, SVI, and MVI for secondary students in treatment classrooms are displayed. Data shown are means on a five-point rating scale.