

## **BOARD # 212: Partnering with Community-Based Organizations to Support Pre-Service Teachers in developing Competencies in Culturally Responsive Teaching and Family Engagement (Work in Progress)**

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## **Partnering with Community-Based Organizations to Support Pre-Service Teachers in Developing Competencies in Culturally Responsive Teaching (Work in Progress)**

### **Background: Addressing the need-to-know local students, families, and community**

The National Research Council's report [1] on "Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics" (2011), states goals of expanding the STEM-capable workforce and increasing scientific literacy for all students and highlights providing student-centered learning climates as one of the elements to support learning. In addition, the National Science Board Vision 2030 [2] further emphasizes the need to develop STEM talent for America, and the Massachusetts Department of Elementary and Secondary Education Office of STEM [3] states the goal to "increase authentic connections of STEM learning to everyday experiences, local environments, and the sociopolitical context." Learner-centered environments help students make connections between their prior knowledge and current lives, yet K-12 STEM teachers can make finding connections difficult when they do not share the identities or lived experiences of their students [4]. Learning and doing STEM that is relevant to the daily lives and concerns of K-12 students and their communities are key to broadening the participation and the future workforce in STEM [5]. Thus, preparing and developing K-12 STEM teachers with culturally responsive teaching (CRT) competencies is essential. This paper describes initial efforts and assessment with pre-service teachers volunteering in the local community as a foundation for CRT.

In efforts to prepare our pre-service STEM teachers to be culturally responsive educators, the Teacher Preparation Program (TPP) at Worcester Polytechnic Institute (WPI) has developed a foundational course that is immersed in community engagement. Partnering with local community-based organizations (CBOs) has afforded opportunities for our pre-service teachers to become familiar with the assets of our urban gateway city and its diverse population that includes many immigrants and refugees. The demographics and lived experiences of the students in the classrooms that the pre-service teachers will have during their student teaching practicum are often different from theirs. Figure 1 compares the percentages of student race/ethnicity of the K-12 public school district [6] vs. the university [7]. The local public school district reports that 58.5% of its students' first language is not English and 30.4% are emergent multilingual learners. Furthermore, the district reports that 71.4% of their students are low-income [6], while WPI is a private STEM-focused institution.

Earlier surveys by TPP students, mentor teachers, and TPP faculty indicate that our pre-service teachers would be better prepared to do their student teaching practicum in our local public school district if they got to know the K-12 students in the City of Worcester beforehand. In addition, making STEM more relevant and meaningful necessitates a deeper understanding of the assets the City and its population [8,9]. Thus, CRT approaches have been strategically integrated into the entire TPP curriculum. A concerted effort to strengthen the TPP was enabled by a Noyce Track 1 project, with the goal that by graduation, our pre-service teachers are ready to teach as culturally responsive, effective and reflective educators. We piloted a new TPP course for pre-practicum experiences immersed in the community. While this paper is based on our

local context, some of our experiences and results might be transferrable or adapted for other teacher preparation programs.

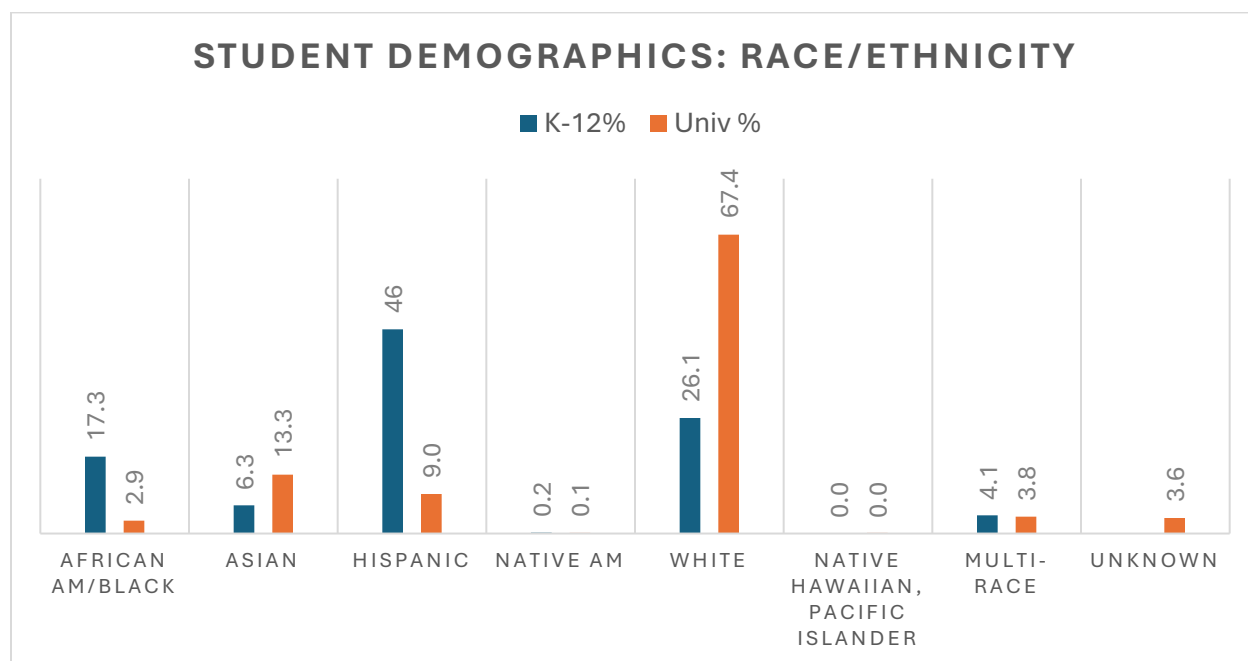


Figure 1. Comparison of student race/ethnicities percentages of the local K-12 public school district (where student teaching is done) and the university (with Teacher Preparation Program).

### Piloting a new Foundational Course embedded in the Community

As the first required education course of the TPP program, the course goal is to “engage on a regular basis with local community-based organizations (CBOs) that support local K-12 students (and their families) to develop “teacher-student” relationships that enable reciprocal learning of each other’s assets and lived experiences. Strategies for reflective practices, safe learning environments, and group management are to be observed and practiced.” The pre-service teachers are told that the main course aim is to develop authentic relationships with K-12 students and to learn from them. The course is structured such that weekly scheduled class time is at a CBO site (for a total of 18 hours). The university community service van is utilized to avoid challenges with transportation. One of the course instructors does significant planning ahead of time to develop all the logistics (e.g., paperwork, K-12 and university school schedules) and to establish the pre-practicum experiences to have shared goals and expectations with the CBOs. The pilot class ran in Spring 2024 with 7 pre-service teachers and future iterations are expected to have an enrollment of 8-12 students. The CBO partners are intentionally selected and located in areas that were historically in redlined zones [10].

The pre-service teachers spend significant time at a CBO partner site on a weekly basis, usually in an afterschool and/or Saturday program, and help tutor students or facilitate enrichment activities. Our non-profit CBO partner sites serve many low-income, immigrant, and refugee students (who attend the public school district) and their families. Alongside the community engagement experiences, the pre-service teachers meet weekly on-campus for class discussions

and complete assignments that include guided reflections. Course learning objectives include examining identity and intersectionality, implicit associations, opportunity vs. achievement gaps, saviorism, microaggressions, Yasso's community cultural wealth [11], asset-based approaches, growth mindsets [12], and funds of knowledge [13]. Gaining competencies in CRT is an important objective of the course, where outcomes include pre-service teachers practicing cultural humility when engaging with community members and adopting a culturally responsive lens to working with the community and towards teaching. Teacher Prep students are introduced to 4 out of the 8 CRT competencies by New America's reflection guide [14]: Reflect on One's Cultural Lens, Recognize and Redress Bias in the System, Collaborate with Families and the Local Community, Communicate in Linguistically and Culturally Responsive Ways. The CRT competencies and reflections were part of the weekly assignments for the course.

### Measuring the Impact of the Community-Based Pre-Practicum Experience

Our study set out to investigate if and how community-based teaching experiences combined with training in CRT prepares our pre-service teachers to teach in urban high-need school districts. A simple pre/post-course survey (Table 1) was created with four statements using a 4-point Likert scale to measure their agreement on:

- 1) experience working with diverse populations (race/ethnicity, socioeconomic status, languages, cultures, etc.),
- 2) comfort in teaching in urban environments with a wide range of diversity,
- 3) level of understanding/awareness of the lived experiences of students and their families in urban settings, and
- 4) ability to implement culturally responsive teaching strategies.

Open-ended prompts follow each survey statement to explain their response. This same survey was designed to be administered at other points in time along the TPP curriculum (e.g., start of TPP, before and after student teaching practicum). Our Noyce program evaluator collected the survey data and held a focus group with the students at the end of the pilot course.

Upon enrollment in the pilot foundational course, TPP students shared that they were comfortable with teaching in an urban environment that includes a wide range of diversity, verifying that they have had previous experience working with diverse populations. They were less aware of the lived experience of students and families who live in urban settings (Table 1).

Table 1. Pre-course responses to survey about teaching in urban settings with diverse populations.

Survey statement and explanation for response	% of Response				
	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean Rating
1. I have worked with diverse populations (in terms of race/ethnicity, socioeconomic status, languages, cultures, etc.)		29%	29%	43%	3.14
2. I am comfortable teaching in urban environments with wide range of diversity.			57%	43%	3.43
3. I am aware of the lived experiences of students and their families who live in urban settings.		29%	57%	14%	2.86
<i>Briefly explain your response:</i> <ul style="list-style-type: none"> <li>I was born and raised in Worcester and living in Worcester has exposed me to this.</li> </ul>					

<ul style="list-style-type: none"> <li>• I grew up in a town that was not very diverse and have not been exposed to urban settings.</li> <li>• I have worked in some capacity with a lot of different groups such as students with disabilities and people from foreign countries</li> </ul>					
4. Understanding cultural responsiveness as an approach to viewing students' culture and identity as assets and <b>culturally responsive teaching</b> as creating learning experiences and environments that value and empower all, <b>I understand how to implement culturally responsive teaching strategies in my teaching.</b>	14%	43%	43%		2.29
<p><i>Briefly explain your response:</i></p> <ul style="list-style-type: none"> <li>• I know about culturally responsive teaching and try to implement it as I know how to, but I definitely want to learn more about how to better implement this into my own teaching.</li> <li>• I'm not sure how I would go about it, aside from being inclusive.</li> <li>• I try to implement this as much as I know how to, but I definitely want to know more because I can and want to improve at this.</li> <li>• I have worked with kids that come from different backgrounds and understand how to include them.</li> <li>• I don't think I have enough experience in teaching and working with a diverse group of students to say that I agree with that statement.</li> <li>• While I understand the concept and agree that it is effective, I haven't tried implementing it</li> </ul>					

Preliminary results from the pilot of the foundational course indicate that pre-service teachers self-report that they already have awareness of and have had experience working with diverse populations. However, the open-ended responses reveal a recognition in needing to learn more about the local community and that they have yet to learn specific culturally responsive teaching strategies. Because this course is the first of several TPP required courses, CRT strategies are not the focus but instead the course sets up the disposition [15] to be curious about incorporating CRT into their teaching in order to connect to and engage their students. Post course survey quantitative results of the 4 statements were very similar, but open-ended qualitative comments revealed deeper understanding and growth:

- *I'd say I definitely worked with diverse populations. I think it will take more time for me to be fully comfortable with it though. I think it will take much longer and require significantly more relationship building to understand the lived experiences of students and their families although I am aware that they have these experiences.*
- *I learned so much about how to consider the experiences of the different cultural groups when developing instruction.*
- *My time at [CBO] allowed the opportunity for transformative learning for me because I was able to experience and understand where some of the kids that I will be teaching in the classroom later on are coming from.*
- *Worcester is such a diverse area, and so just to be able to get out of my little bubble and experience another part is eye opening.*

TPP students responded on the post-survey that they were able to practice creating a safe learning environment for the students, were able to witness and practice inclusive group management strategies, and recognized that their thinking and decision-making was based on their perspective, both conscious and unconscious, of those they worked with.

The TPP students also shared what they learned from the strengths, resourcefulness, and assets evident in the CBOs to promote students' engagement and academic success and what they learned from the students, including:

- *The CBO encouraged everyone to be themselves and formulated activities that the students wanted.*
- *The students felt very comfortable at the CBO and enjoyed their time, all while the leadership upheld the integrity of the academics and homework.*
- *The leadership at the CBO always tries to be positive and talk about things kids can relate to.*
- *I learned that students can ask inquisitive questions that sometimes can be hard to answer. As a future educator, I will need to either further educate myself on various surrounding topics or maybe even learn how to turn the question on the student and allow them to think and possibly engage in a discussion.*
- *I got to learn about the rich history and culture from some of the places that the kids are from.*

In addition to the survey data, the participating TPP students engaged in a focus group session reflecting on their course and fieldwork experience with the project external evaluator on the last day of the course. A review of the collected qualitative data produced the following highlights:

- *I came into this course with a mindset from a student's point of view regarding what qualities a teacher should have, but I feel like I really learned about a teacher's mindset in terms of how to support students and help them form a good mindset.*
- *I really think developing a good relationship with the community, students, and families is one of the most important aspects of being a good teacher and building trust.*
- *I think we all were surprised about the diversity of the students.*
- *I was glad I was able to develop bonds with the students.*
- *At the beginning of the course, especially the field experience, I was worried about how everything would go, but while I was involved, I always had a blast with everyone, meeting new people and experiencing new things. ... I learned about myself, how much I really don't know, and that I have much more to learn, especially about others.*

## **Discussion and Conclusions**

As the pilot of a brand-new course in the Teacher Prep Program, the instructors felt that many of the objectives were met while the course can also be greatly improved with the next iterations (e.g., more time at CBOs [16], community walks [17]). The combination of the class meetings, assignments, and community engagement throughout the term allowed time for the pre-service teachers to absorb the CRT competencies and relate them to their experiences in real time. The relationships with the community-based organizations were also strengthened and has led to additional partnerships beyond the course (e.g., Noyce summer internships, volunteering and federal work study opportunities for our other college students) [18]. The simple survey designed for the course and TPP program, however, did not yield quantitative results that matched the growth seen with the open-ended qualitative responses and focus group results. One interpretation is that there is a tendency for survey takers (i.e., the TPP students) to respond with perceived social desirability [19] rather than real ability and/or that the survey statements are too

general and open to different interpretations. Contextualizing the survey statements to our city, local K-12 public schools, students, and families might improve the survey. Utilizing other published surveys, such as the Culturally Responsive Teaching Preparedness Survey (CRTPS) [20] might prove to be a more appropriate measurement tool to use throughout our teacher prep program. For purposes for this foundational community-based course, specific reflection assignments could allow insight into the pre-service teacher's experiences and dispositions [15], as well as the open-ended final project to demonstrate a relationship developed during the course. Follow on TPP courses [21] delve further into CRT theory and practices [22,23,24].

We plan to administer the CRTPS at three key points of the TPP curriculum (i.e., beginning of this foundation course and pre-practicum experiences, before the student teaching practicum, and after the practicum). Descriptive statistics could be used to analyze the survey data per anonymized student over time, as well as determining the median and range as the central tendencies for the class. We will investigate any changes over time (correlating with TPP courses and experiences) and to identify any gaps in preparing our students to be culturally responsive with their teaching. Results from this study will ultimately help inform improvements to the course and experiences of our and possibly other Teacher Prep Programs as well.

### **Acknowledgements**

This material is based upon work supported by the National Science Foundation under Grant No. 2050461.

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