

# Defining and delivering “equity” in an RPP

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**Abstract**—Computer science (CS) has the potential to positively impact the economic well-being of those who pursue it, and the lives of those who benefit from its innovations. Yet, large CS learning opportunity gaps exist for students from historically underrepresented populations. The Computer Science for All (CS for All) movement has brought nationwide attention to these inequities in CS education. More recently, financial support for research-practice partnerships (RPPs) has increased to address these disparities because such collaborations can yield more relevant research for immediate educational/practical application. However, for initiatives to effectively engage in equity-focused initiatives toward making computing inclusive, partnership members need to begin with a shared definition of equity to which all are accountable. This poster takes a critical look at the development of a collaboratively developed definition of equity and its application in a CS for All RPP of university researchers and administrators from local education agencies across the state of California. Details are shared about how the RPP collectively defined equity and how that definition evolved and informed the larger project’s work with school administrators/educators.

**Keywords**— equity, RPP, computer science education, leadership, administration, community building

## I. INTRODUCTION

As the computer science (CS) education community confronts our history of inequitable teaching practices, structures, and policies that have resulted in Black, Latinx, Indigenous, low-income, female, and disabled students being left out of CS education and career opportunities, the field has sought to translate equity-focused research into more relevant and practical applications through research-practice partnerships (RPPs). While valuable for supporting long-term change, many RPPs lack a shared definition of “equity” across researcher and practitioner communities to guide their work. Our RESPECT Conference poster addresses this issue by describing how our RPP, composed of K-12 administrators and university researchers across the state of California, collaboratively developed an “equity” definition that served as a touchstone for how we developed resources for educators, administrators, and policymakers. More specifically, this poster describes: (1) our process for defining equity, (2) how that definition impacts our work, and (3) key lessons learned through this exercise.

## II. BACKGROUND - RPPs AND A FOCUS ON EQUITY

Many important advancements have been made to create culturally responsive curricula and equity-minded professional development, yet the CS for All movement still lacks adequate

support for school leaders whose decisions impact whether students have access to computing classes in their schools. To address this problem, our RPP came together to develop two leadership-focused resources: the CS Equity Guide and accompanying Administrator Workshop answering key questions about how to implement CS in K-12 public schools while keeping equity at the center. But before the Equity Guide and Workshop were developed, we had to ask ourselves: What does “equity” actually mean within the context of our RPP and in these resources?

We believe that in order for equity to be a focus of RPP efforts, it must also be a central tenet built into the RPP’s research and learning processes. Embracing Freire’s notion of praxis, we recognized that a word like “equity” would be “an empty word” without real impact on educational transformation when “deprived of its dimension of action,” and that action similarly has little impact without firm roots in theoretical foundations [1, p. 68]. Thus, deliberate effort must be made to honor each partner’s funds of knowledge, values, language, and experience that build action into the theoretical concepts of equity toward a shared definition to guide our work. When equity is operationalized intentionally in an RPP, both practitioners and researchers may also feel that their input and interests are equally valued [1]. By challenging the structural hierarchy that oftentimes prioritizes the problems and the knowledge base of the researcher, RPPs can elevate the practitioner’s needs and experience to produce more relevant research and outcomes, and allow for the critical examination of how power and culture can impact research and education implementations [2, 3, 4].

## III. DEVELOPING THE DEFINITION

We decided that defining “equity” from the perspectives and cultures of all stakeholders would strengthen our collective vision. We developed a process to co-create a definition of equity in the first few meetings. The fourth author shared best practices from his own district defining equity and thus led the process for the RPP. This process involved two rounds of having the RPP break off into pairs of researcher and administrator, developing their own definitions together, presenting these definitions to the group as a whole, then synthesizing all ideas into the following definition:

“Equity is accomplished when every student is provided with what they individually require to learn and succeed in fulfilling their personal, academic, and social advancement, and when success and achievement is not predicted by any demographic factor. This requires continually interrupting

inequitable practices, examining biases, and creating inclusive environments for all, while discovering and cultivating the unique gifts, talents and interests that every student possesses.

Equitable practices are based in the belief that every child's educational experience should be rigorous and relevant, and that everyone is capable of learning. These beliefs require providing a learning environment that is safe and respects every student.

While often used interchangeably, equality and equity are not the same. Equality suggests that all people should simply have access to the same resources, regardless of need. With equity, resources are distributed according to different students' needs, while taking into account how certain students have been systematically denied access to educational resources, opportunities, and experiences based on race/ethnicity, gender, sexual orientation, socioeconomic class, and disability. An equity-based approach means acknowledging and challenging: (a) the institutional barriers impacting youth differently based on the way they look or where they come from, (b) countering practices rooted in stereotypes about who can or should excel, and (c) recognizing that people both present themselves and are treated differently in different contexts depending on how their various identities overlap and intersect. This requires an ongoing and cyclical approach to examining factors impacting youth's experiences.

Computer science and computer science education have been documented as being highly segregated along race/ethnicity, gender, and socioeconomic lines due to a lack of access to high-quality computer science learning opportunities for all students. However, an awareness of equity issues in the computer science education community presents an opportunity to structure learning opportunities and environments with equity considered throughout the progression from K-12, as frameworks, policies, and courses are being built. Not only is computer science an emerging field of study that leads to high-wage and high-demand careers that can address socio-economic inequality, but it can empower students to be critical users of technology and creators in all fields touched by technology, finding their voice in the digital environment that is becoming increasingly part of our communities."

#### IV. LESSONS LEARNED

Our RPP learned how valuable it was to ground everyone in a shared understanding of equity because it informed every aspect of our collaboration moving forward. If we had the opportunity to try this again, we would start the defining process with an activity exploring systemic inequity and personal bias before beginning the process of developing the definition to further deepen our conversations.

One practitioner partner felt that as a busy administrator, she was interested in what actions the group was going to take to improve outcomes in her district and other districts, and not in what she saw as an academic exercise of defining the term "equity." Her reaction serves as an important reminder of the need to ensure that these types of activities make clear connection to immediate use, practical purpose, and practitioner time and needs.

Still, the rest of the RPP valued the equity definition process, and appreciated that a practitioner partner led the activity. Furthermore, we found the definition served useful in informing our CS Equity Guide, Administrator Workshop, and multi-stakeholder professional development activities.

The equity definition continues to push our RPP's thinking. After the murder of George Floyd, we discussed the lack of Black representation in our RPP. Although we aimed to build an RPP composed of administrators from LEAs representing varying geography and sizes of California's diverse school system, we recognized these variables as metrics resulted in a group of administrators whose personal demographics do not represent the state. We hope to include more Black and Brown administrators in our partnership, but our struggle in doing so points to a larger problem of a lack of Black and Brown administrators in California. We also need to work to ensure administrators with disabilities and LGBTQIA2+ administrators are included in our RPPs to represent equity in all its dimensions and intersections. Our process of defining equity helped shine a light on issues such as these in our RPP moving forward.

In order to move definitions of equity beyond an academic exercise, we will revisit our definitions regularly and evaluate whether they correlate with our students' and teachers' realities, as well whether we are doing what is necessary to eliminate systemic inequity. As Martin [4] stated, conceptualizing equity as a process "highlights the fact that the necessary hard work will be ongoing and even when gains are made, a high degree of vigilance will be necessary to ensure that needs of marginalized students are attended to and that our definitions of equity are responsive to who these students are, where they come from, and where they want to go in life" (p. 14).

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