This NSF-funded project builds the capacity of an established research practice partnership (RPP) to address equity in CS education for underrepresented students. The Computer Science Teaching and Learning Collaboratory (CS-TLC) is a curated forum of a diverse group of education stakeholders designed to facilitate and leverage the exchange of knowledge and expertise and to promote collective inquiry regarding the most efficient and effective way to navigate existing resources and opportunities in CS.

There are already many excellent CS curricula and resources including lesson plans and classroom activities available to both novice and experienced CS teachers. There is also a plethora of professional learning opportunities they can choose from. The challenge is how to make an informed choice about CS resources that provide the best match to the unique needs and circumstances of teachers and students. This is not a new problem. Information overload is a well-documented unintended effect of today’s complex and rich information environment (1), which increasingly impedes users’ ability to access and retrieve relevant resources in a timely and efficient manner (2). Modern information retrieval requires searching, identifying, finding, and evaluating relevant information, and then organizing it in a way that ensures efficient and effective use (3). In theory, information and communication technology can greatly improve this process, but ultimately it is the way users use such technology that determines its usefulness. It is therefore common to engage users themselves in the process of co-designing and testing such knowledge management and collaboration platforms. An important goal of CS-TLC is to engage members of the RPP in a co-design process that will ensure the end product is both useful and sustainable.

The extant information science literature provides numerous prescriptions regarding how to individuals can manage information overload (4). However, such user-oriented solutions are useful only to the extent that the systems people interact with are user-friendly. Engaging users themselves in a systematic process co-designing the system they will ultimately use is increasingly considered best practice (5). This iterative process progresses through a series of five steps, which each step building on the previous one:

**Step 1:** needs assessment (understanding the needs of diverse group of users, e.g., novice vs. experienced CS teachers).

**Step 2:** access (taking stock and curating available resources or existing repositories of resources)

**Step 3:** knowledge management (classifying and organizing resources in the most intuitive way to users and their needs)

**Step 4:** ranking (screening and ranking available resources for quality, relevance, and potential for broad application)

**Step 5:** maintenance (setting procedures and tools for users to add and share additional resources, including the one they create).

One of the first steps of the co-design process is conducting an exercise where users are asked to envision what the end program will look like. Below are ideas raised by the group:

- Can we create a ‘capsule collection’ of CS resources?
- What are the basic pieces you need to underpin everything else?
- What are the most versatile and foundational items?
- Should each teacher be free to access and use any resource they want?
- Or do different circumstances warrant different norms and procedures?
- Is there a place for a PLC team to support choices about CS resource use?
- Given information is ever changing, should we have guidelines on how often to update our sources?
- Can we create a ‘capsule collection’ of CS resources?
- What are the basic pieces you need to underpin everything else?
- What are the most versatile and foundational items?

The critical question...

How does one take control of their CS resource environment?