

QuarkNet Advisory Board Recommendations
January 28, 2023

- 1. Collect data on the demographic characteristics of program participants so that everyone can see the evolution of diversity of participants over time.**

A large-scale case study was conducted (March 2023) on school-wide student demographics for schools represented by a sample of QuarkNet teachers. This information is summarized by center as we think this will help in its usefulness.

- 2. Make every reasonable effort to collect metrics on participation in all forms, including use of the Data Activities Portfolio website. These can be used to demonstrate the efficacy and reach of QuarkNet programs.**

At this stage, website metrics of the Data Activities Portfolio are limited to counts of "reads" or "clicks" on the visits to a specific webpage for each activity. From an external evaluation standpoint, this information is very limited as we cannot unpack it to provide any information about the who/what/how/why represented by a single count. If QuarkNet staff desires, this information could be highlighted on the QuarkNet webpage -- in a similar way that teacher testimonials are included -- to highlight the program outreach in a communications or marketing research vane.

- 3. Implement an evaluation of the collaborators at all levels. While evaluation is often used to help remediate under-performing staff, it can also be used to motivate and encourage successful staff members and mentors.**

At this point we are not prepared to do this type of "performance review" beyond what staff, mentors, and teachers receive through their own institutions. However, there are tools that we could investigate if we decide to go in this direction.

- 4. Pursue opportunities to elevate the visibility of QuarkNet, to help demonstrate success to a broader audience, and also to get the word out to potential teacher participants and to spur other partnerships. This could be done through social media that might be best managed by students; leveraging university centers that might also want to promote their own activities; and awarding prizes to particularly successful teacher participants.**

Staff have been working with centers to recruit new teachers through focused efforts including advertising QuarkNet opportunities using informational flyers and connecting with district science coordinators to spread the word. There has been success on this front, including at the Virginia Center and Syracuse University Center. At the Rice University Center, staff and center leadership have partnered with the Rice Office of STEM Engagement to recruit participants for an upcoming workshop to bring in more teachers from schools serving populations underrepresented in physics. We have also been working with centers to encourage a QuarkNet presence at local sections of AAPT and other state and

local level physics/science teacher organizations. Examples in 2023 include presentations or workshops at the MN Section of AAPT, CO/WY Section of AAPT, and the Northern Illinois Science Educators meeting. In addition, staff and fellows present on behalf of QuarkNet several times per year at national conferences like AAPT and APS.

Rather than prizes, we are planning a “years of service award” for centers and mentors much like university and lab programs that honor people say at 10, 15, 20-year anniversaries. We want to pursue having an annual meeting/conference of all centers not only to exchange ideas but as an opportunity to give out the service awards. This might be held remotely or we could ask for supplemental funding. We can notify chairs and deans at the college level. For teachers, we may create several short narratives about teachers who have done exceptional work with QuarkNet and describe their journey. We can post center awards and teacher narratives on the website with their permission.

5. Consider partial rotation of QuarkNet fellows to make room for new ones, as and when needed.

The staff is reluctant to rotate fellows off for two reasons:

- As a long-term teacher development program, there is value to keeping fellows in their groups for a long time.
- We provide a lot of fellows’ training, and as they develop, fellows have more to offer to the program and to QuarkNet teachers, so their rotation off could be counter-productive.

The staff is open to letting all fellows know that we accept voluntary retirement to make room for new fellows. Also, should a fellow become less involved, we can deal with this case-by-case. That said, often some of these fellows contribute in less tangible but still important ways due to unique experience, expertise, or insights.

6. With the new five-year funding proposal submitted, it is not too soon to think about how to position the right team of people to lead the proposal that will follow it.

We have started to look for people to take over the more senior leadership roles. One potential candidate will start getting involved in the program in the new year. We welcome suggestions from the board (in confidentiality) if they would like to make any recommendations.