

**Name of Principle Investigator:** Jinseok Heo

**Project Title:** A Virtual Instrumental Analysis Laboratory (VIAL) for Buffalo State and Open SUNY

1. Please consider the original timeline and deliverable targets. How is your project progressing compared with the original estimates?

Overall we are in line with the proposed project timeline. Each participant made their own plans to cope with the project schedule.

2. How is spending progressing when compared with the original budget estimates?

Spending is on target with our original proposal. 70 % of the funds have been expended as of March 31. The major spending on this project is service of faculty participants, payment for student workers and purchase of equipment. Faculty participants were flexible on the payment schedule and spent more time on the project than they got paid. To get started on the project, we managed to borrow equipment from school or department until the budget was available in our account.

3. Please provide feedback regarding your experience with the project execution. In particular, any issues or roadblocks you've encountered that may have been unexpected.

To assess the effect of VIAL project on training students, we need a control group who do not use VIAL for class. We originally planned the student group in Fall 2013 semester but the number of students enrolled in the class was so few that this group might not represent a control group. Alternatively, we could use the class students in Spring 2014. Using the same class students, we can assess the effect of VIAL by examining the students' performance in the lab experiments that use the VIAL materials and comparing to labs without VIAL enhancement.

4. What are your positive observations or pleasant surprises about your team's interaction or project process that might would be helpful to other PI's?

One of biggest jobs for each faculty participant is to create video tutorials for the analytical instruments that each of us specializes in. We could share our experiences and know-how with each other on how to produce video tutorials. This could save time and efforts significantly.

5. Please describe any challenges you've encountered working with your project team that you've found solutions for that might be helpful to other PI's.

Seeking advice and help is an important part in moving forward a project. One of the goals that we would like to achieve is to remotely control an analytical instrument. Theoretically off-campus users may access to an analytical instrument in our campus and run it for their teaching classes or doing research. And, if instructors need to show a large audiences how to use an instrument, they can use a large classroom by remote access to the computer that controls the instrument in the lab. Our campus IT specialists needed to become involved and have responded to our needs relatively quickly.