Postdoctoral Researcher Mentoring Plan for "School Structure and Science Success"
FEEDBACK/EVALUATION
Years 3-4, 2013-2015

*1. **Orientation.** The Postdoctoral Researcher will be introduced to the project through individual meetings with faculty members, examining project documents, and becoming familiar with the participating districts and their associated demographics and test performance via online sources. Benchmarks related to the project will be established, roles and responsibilities identified, and the desire to blend theory with practice will inform the co-determination of goals for the Postdoctoral Researcher.*

Throughout my time with the project, I have had meetings on a weekly or bi-weekly basis with John and/or Betsy to talk through aspects of the project as well as next steps. Every few months, John and I would have a phone conference with Malcolm and his postdoc to coordinate our efforts, share resources, and just generally check-in. John and I also traveled to Boston to meet with our external evaluator twice in order to report on our progress and seek advice concerning the project. In addition to these informal meetings, I attended the advisory board meeting in Orlando in 2013 as well as an NSF PI meeting in 2014, which provided me with opportunities to discuss the project more in depth with other stakeholders.

During these two years, John and I were in constant communication concerning goals, timelines, and roles for the project. Specifically, in Fall of 2013, I was placed in charge of hiring and managing student workers who collected qualitative data for the project. In Spring of 2014, I worked with a graduate STEM class and had those students collect more qualitative data for the project in conjunction with their Master's theses. In Spring of 2014, I also directed a student worker to interview formal science teacher leaders. Over the summer of 2014, I worked to analyze qualitative data and write conference proposals related to the project for AERA, ASTE, and NARST. In Fall 2014, I managed the administration of the SOLIS survey as well as give-backs for schools. Finally, in Spring 2015, I continued to manage the administration of the SOLIS survey as well as worked to administer a social networks survey in schools and analyze that data.

*2. **Entry into the Profession**. Because science education is so complex, the project offers many opportunities for the Postdoctoral Researcher to better understand the field. This includes the necessary interplay between theory and practice, the various approaches to data collecting and interpretation, as well as the cultural norms of interacting with fellow faculty and school district personnel. In addition to these research-based experiences, we will provide supplemental exposure in the form of course delivery, field supervision and academic advising, as those are standard expectations of science education faculty candidates. Included within this portion of the mentoring will be learning how to work with undergraduates and graduate students alike.*

Regarding data collection, I am a qualitative researcher by training. Through this project, I was able to deepen my qualitative research skills via crafting interview protocols, managing large amounts of data, constructing coding schemas rooted in theory, and analyzing this data via a software program called Dedoose. I was also able to increase my knowledge of quantitative data collection via meetings with our statistician, and working with quantitative data from the SOLIS and student test data. Moreover, relevant to data collection was the opportunity to write

several IRBs for our various sub-studies during the past two years. To clarify issues within the IRBs, I met with IRB personnel to better understand the process.

To gain access to schools, occasionally I accompanied John to meetings with district personnel. I was also privy to several of these types of conversations via email, and interacted with several district and school leaders during the administration of the SOLIS in the 2014-2015 school year.

During my time at UConn, I taught two graduate level courses: a STEM school-based research course and a teacher leadership course. Working with other UConn faculty members, I constructed both syllabi and designed the assignments and rubrics used in the courses. During these courses, I often worked with students one-on-one to talk through course-related issues or larger career-related issues. While I did not teach any undergraduate courses (I already had a great deal of experience with this at my previous institution), I did mentor and supervise undergraduate student workers as they learned about Project SOSA and collected data for the project.

*3. **Publications and Presentations.** In addition to attending professional conferences, the Postdoctoral Researcher will work closely with project staff to collaboratively develop presentations. In addition, mentoring will be supplied with the preparation of manuscripts for publication that directly result from project activities. In addition, others ways to engage the Postdoctoral Research will include the review of conference proposals and journal manuscripts.*

The following are manuscripts and conference presentations I have completed while working on this project.

Manuscripts

Wenner, J.A. & Campbell, D.T. (in review) Examining teacher leadership. Smetana, L., Wenner, J.A., Settlage, J., & McCoach, B. (Revised - resubmitted). Clarifying and capturing 'trust' in relation to science education: Dimensions of trustworthiness and associations with equitable student achievement.

Settlage, J., Butler, M., Wenner, J.A., Smetana, L., & McCoach, B. (In press). Examining elementary school science achievement using an organizational and leadership perspective. *School Science and Mathematics*.

Wenner, J.A. & Settlage, J. (2015). School leader enactments of the structure/agency dialectic via buffering. *Journal of Research in Science Teaching, 52*(4), 503-515.

Wenner, J.A. (In progress). Science teacher leaders in elementary settings.

Conference Presentations

Settlage, J. & Wenner, J.A. (2015, April). *Social network typologies: Insights from STEM-themed urban schools.* Paper presented at the American Educational Research Association Annual Meeting, Chicago, IL.

Wenner, J.A. & Campbell, D.T. (2015, April). *Examining teacher leadership: A decade of research after York-Barr and Duke*. Paper presented at the American Educational Research Association Annual Meeting, Chicago, IL.

Wenner, J.A. & Settlage, J. (2015, March). *Policy implications from social network typologies of STEM-themed urban schools*. Paper presented at the NARST Annual International Conference, Chicago, IL.

Smetana, L., Wenner, J.A., & Settlage, J. (2015, March). *Exploring professional relationships about science within K-8 schools.* Paper presented at the NARST Annual International Conference, Chicago, IL.

Settlage, J. & Wenner, J.A. (2015, January). *School organization and science achievement (Project SOSA): Schoolwide influences on equitable student performance.* Paper presented at the International Congress for School Effectiveness and Improvement Conference, Cincinnati, OH.

Wenner, J.A. & Freeman, T.B. (2015, January). *Using teachers' voices to inform professional development on science teacher leadership*. Paper presented at the Association for Science Teacher Education Conference, Portland, OR.

Settlage, J., Butler, M.B., McCoach, D.B., Madura, J., Wenner, J.A., & Andrada, G. (2014, April). *Organizational and leadership factors associated with elementary school science test performance*. Paper presented at the American Educational Research Association Annual Meeting, Philadelphia, PA.

Wenner, J.A. & Kittleson, J.M. (2014, March). *The impact of contradictions associated with elementary science instruction: What can we learn?* Paper presented at the NARST Annual International Conference, Pittsburgh, PA.

Settlage, J. & Wenner, J.A. (2014, March). Science leadership under challenging conditions. In M. Varelas (Chair). *The structure-agency dialectic: Insights into science learning and teaching of historically marginalized youth in the U.S.* Symposium presented at the NARST Annual International Conference, Pittsburgh, PA.

4. ***Navigating Networks.*** *With science educators widely dispersed and only rarely concentrated at a single institution, mentoring will be supplied that models how to establish networks of support. These will include identifying collaborators across disciplines (e.g., educational psychology, learning technologies or school leadership) as well as across institutions (i.e., via collaborative projects, co-authorships, etc.). Beyond introducing the Postdoctoral Researcher to existing networks, strategies will be offered about gaining access to other professional educators as a means for being inducted into the field and becoming successful at the work.*

The conferences I have attended during my two years here have provided the best opportunities for networking. During these conferences, John introduced me to several of his colleagues and encouraged me to make connections with them on my own. John has also introduced me to faculty on the project who are in different departments but have aligning research interests. For example, I have met on several occasions to work through aspects of the project with faculty from the Educational Leadership department here at UConn (e.g. Sarah Woulfin, Jennie Weiner, Richard Gonzales, Morgaen Donaldson). In terms of my future networking, John has provided concrete advice on how to connect with schools and others once I move to my next institution.

5. ***Success of the Mentoring.*** *Regular meetings between the Postdoctoral Researchers and the Principal Investigators will afford tracking of progress toward the goals established for the postdoctoral program and during subsequent career endeavors. The combination of scholarship, teaching, service and networking will all be considered key dimensions of success.*

John and I have been in constant communication regarding my participation and progress in this project. He has pushed me to try new things, make new connections, and expand my conceptions of science and schools.

Overall, accepting this postdoctoral position has honestly been the best decision I have ever made. When I went on the job market looking for an assistant professor position in the Fall of 2014, I felt incredibly well-prepared. I now have a better understanding of how to write a large grant, how to manage a multifaceted project, how to gain access to school research sites, how to turn data into thoughtful presentations and publications, and how to think about fruitful future directions for the research at hand. Although my doctoral education was excellent, I feel that working as a postdoctoral researcher allowed me to truly understand the world of academia, all the while guided by an expert. I believe that working with John on Project SOSA has set me on the path to success in my future endeavors.