

Science Education Policy for the “Young” at Heart

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VEXTATION

I am an ex-neuroscience researcher who made the jump to science education in December 2007. It was a fortuitous request from a friend that ultimately changed the focus of my career. I was involved in science education and outreach throughout graduate school, but my post-doc was spent entirely at the lab bench. I missed seeing the bigger picture. When a friend asked if I could give a science demonstration at her community center, I eagerly volunteered and went looking for materials. I found them and more. While in the storeroom, I asked the neuroscientist-turned-head of the science education department, how he got this dream job. It turns out he had an opening for a science education post-doc since his current post-doc was going back to England. I saw an opportunity and jumped. I gave my notice that week and I haven't regretted the decision. In fact, I have learned more in my post-doc in science education than I did during my entire post-doc at the bench. The passion for the process of science is what joins us all, whether working on an elusive molecular pathway at the bench or trying to spark the intellectual curiosity of a middle school student.

In my science education career thus far, I've learned that the forums for science education are endless but the goals are often the same – to encourage the interest and pursuance of science in our communities. For a student, it could be to encourage them to take more science classes or enter a science track at a university. For the larger community, it would be to view science as an important process of life-long learning and that advances in science rely on research. There are many challenges about how best to encourage science education in the public setting. For example, the goals and needs of the public, universities, teachers and school systems often differ. Teachers are desperately trying to meet state standards while sparking student interest in science, as teaching flexibility diminishes and class size often increases. The public wants cures for diseases and ailments, which require research, thus many universities and the NIH look to science education as a mechanism for enhancing public understanding of science, thereby translating into more funding dollars for research. Meanwhile, taxpayers wonder where their money is going. Teachers wonder why there isn't more going to education. Researchers wonder why their grant budgets are stagnant. In short, the science education network has some bugs and despite all the players having the same general goal (i.e., increasing the public understanding of science), individual goals of these different groups can cloud interactions, divide the science education community and create a distrust of how science and research can impact the public.

There are many forums through which a person can influence the field of science education, some of which overlap. What vexes me is how to proceed in my career of science education knowing that progress needs to be made at a level higher than just working with kids or a school district alone. I work primarily with middle school teachers and often hear their concerns along with the concerns of my researcher colleagues. I have feet in both trenches and like being able to see both sides. That said, what could I do to help us all? It has been both a blessing and a curse to be "young in my career". Some want my fresh perspective while others see me, ironically, as not having enough experience to understand the lay public's view of science education. What is a young science educator to do?

VENTURES

My venture has been to try my hand at science education policy at a higher level. I was first inspired at a science education meeting when a former senator urged all science educators to contact their state representatives to get involved as science policy advisors. I went home and immediately volunteered as a science policy advisor for a recently elected Oregon State Representative to help with advising in biomedical health areas that his staffers may not fully understand. He said 'yes' and I was thrilled. This year, I attended a meeting of a science education organization whose mission it is to promote awareness of health and science education partnerships, serve as a resource to and advocate for these partnerships, and build our professional community. When nobody else raised their hand to serve on their organizing committee, I raised my hand. I was commended for volunteering since I was so "young in my career." They took down my name and I am waiting to hear whether I will be tapped to participate. I am also waiting to get tapped with a question by my State Representative.

I have never been one to back down from volunteering or organizing something. I grew up just outside of Washington D.C. and several of my classmates had relatives on Capitol Hill or in policy positions. Likewise, it was commonplace for students to spend their summers volunteering on the Hill or with national organizations like the National Institutes of Health (NIH). This may

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be why I did not hesitate to apply when I learned of the Director's Council of Public Representatives (COPR) at NIH. This is a federal advisory committee made up of members of the public, who advise the NIH on issues related to public participation in NIH activities, outreach efforts, and other matters of public interest. There are approximately 20 representatives from around the country and I am applying to be Oregon's representative, since Oregon does not currently have representation. It would be a four-year term that would run concurrently with whatever job I have. It is a fairly intensive application process but it seems like a great opportunity to impact a field I love so much. For once, it seems that being “young in my career” may be an asset, as they are looking for people from a younger demographic to serve on the Council. I have no interest in going into politics for my career, but I am also not afraid to volunteer either, probably because policy was so close to me growing up. I am hopeful that, whether chosen or not, my background in both research and science education will help increase the visibility of science and research within the public as I continue my career.

As an interesting twist, our office was recently awarded two NIH supplement grants to bring biomedical research to rural Oregon communities. With the help of the middle school teachers with whom we've been working and local health professionals in these communities, we will be hosting a series of health fairs about nutrition around the state. I will be coordinating our efforts on this project, which combine research and science education into one health fair. As part of the interactive exhibit, attendees can enroll as research participants where they learn about the research process and the quality of their own diet and body composition. Participants can consent to have their anonymous data become part of population database for use by researchers studying the relationships between eating habits, body composition, genetics and chronic disease. Thus, this project will not only enhance visibility of biomedical research and the public's health choices, but will also provide pilot data for both future science education and research grants. It is my dream opportunity where two science aims can be accomplished using one forum.

This new position also means that relationships need to be forged as we build these health fairs from the ground up. The network of people involved is already staggering -- teachers, parents, members of the community, local health care professionals, researchers, school districts and even local representatives. All have a stake in wanting the health fair be successful in their community. The notion of social capital, where a group of people with a shared set of values works together to facilitate action and trust within the community, is clearly an underlying current of this project. I see my combined participation in both the Nutrition World project and as a potential COPR member as a unique opportunity to further leverage the social capital of science education and research at local and higher levels. These positions have shared goals that may provide insight about how science education and biomedical research may be best addressed with the public. There is some concern by my colleagues that taking on both projects may take too much time and that I should focus on just Nutrition World while I am on soft money and just beginning this project (and my career). However, I see the potential for learning to be too great to pass up. Moreover, I believe doing both projects may be synergistic as they will enhance the potential gain and social capital of both.

It remains to be seen whether I will be tapped for any of these volunteer positions despite the pleas from the science education community to get involved. I will continue to keep trying. And if I am selected for any of these positions, will any of these ventures be effective in increasing public interest in science education? I believe that understanding policy at a higher level and continuing dialogue with those working in the science education trenches will bolster the efforts of both partners. My career goals are to stay at the intersection of research and science education, ideally running programs that marry these two aspects of science; however, I struggle with the best way to accomplish this career goal as I navigate my path on soft money funding. Currently, I view volunteering in policy as a great opportunity to open doors, not close them. However, I know others do not share this sentiment and I welcome suggestions on how best to navigate this path while on soft money. Lastly, I am wondering at what point I will no longer be “young in my career.”