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The Experience of being a PULSE Fellow
Dr. Alexa J. Lamm, Erica Odera, & Courtney T. Owens



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About the Authors

Alexa Lamm, Ph.D. – Associate Director of the UF/IFAS Center for Public Issues Education & Assistant Professor in the Department of Agricultural Education and Communication

Erica Odera – Research Analyst, UF/IFAS Center for Public Issues Education

Courtney Owens- Graduate Assistant, UF/IFAS Center for Public Issues Education

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Cynthia Bauerle, Ph.D.- PULSE steering committee member & Assistant Director, Undergraduate and Graduate Programs, Science Education, Howard Hughes Medical Institute

Donna Behar- Education & Human Resources Association/Production Specialist, American Association for the Advancement of Science

Shawn Gaillard, Ph.D.- PULSE steering committee member & Program Director, National Institutes of Health

Yolanda George- Deputy Director & Program Director, American Association for the Advancement of Science

Susan Musante – Education Programs Manager, American Institute of Biological Sciences

Shiva Singh, Ph.D.- PULSE steering committee member & Branch Chief, National Institutes of Health

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Background

The Partnership for Undergraduate Life Sciences Education (PULSE) Vision and Change Leadership Fellows program is a collaborative effort funded jointly by the National Science Foundation (NSF), National Institutes of Health (NIH), and the Howard Hughes Medical Institute (HHMI) to catalyze change in undergraduate STEM education. Originally, 40 Vision and Change Leadership Fellows were selected and charged with the task of inspiring and helping life science departments nationwide undertake the necessary work of transforming their programs, following the blueprints laid out in *Vision and Change in Undergraduate Biology Education: A Call to Action*.

The 40 Fellows came from diverse institutional backgrounds, with representation from community colleges, liberal arts colleges, comprehensive universities, and research universities. The Fellows were connected together by a Steering Committee made up of six members (two from each of the funding agencies). For communication purposes, the Fellows elected a Fellows Council of four members (one from each of the four university types) that met with the Steering Committee on a monthly basis to discuss progress the Fellows were making, challenges Fellows faced, and assist in planning Fellows events. In addition, the Steering Committee used an outside consulting firm, Knowinnovation Inc., to assist in guiding the Fellows conversations and activities.

The Fellows chosen were announced in September 2012. Fairly late in the first year, one Fellow was unable continue and chose to drop out of the program leaving 39 Fellows as the main core working towards the initial goal. Their formal connection with the Steering Committee concluded in September 2013. Upon the official completion date, the PULSE Fellows began working independently of the steering committee but still stay in contact with several of the individual members. Funding and support of current and near term activities is continuing. An assessment of the PULSE program was initiated in June 2013 to assess how the PULSE Fellows program was working, to determine whether or not the PULSE Fellows program was achieving its intended goals, and to identify the challenges it faced. The assessment sought to understand the Fellow's experiences and to provide data that could be used to assist in the development of similar future programmatic initiatives.

Methods

One of the objectives of the assessment was to understand the Fellow's experience; how being a Fellow impacted their institutions, departments, the faculty they interacted with, and their personal actions/engagement levels. To develop this understanding, the research team conducted five focus groups. Three focus groups were conducted in person at the Vision and Change in Undergraduate Biology Education meeting held in Washington D.C. in August, 2013. Since not all of the Fellows were in attendance, two focus groups were conducted via conference call. A moderator's guide for the focus groups was developed and reviewed by a panel of experts at the University of Florida. The questions included sought to understand (1) any personal changes occurring as a result of being a PULSE Fellow, (2) how the PULSE Fellows were able to initiate change, and (3) overall thoughts on being part of the PULSE Fellows program.

All five focus groups were moderated by Dr. Alexa Lamm, recorded and transcribed. Both Erica Odera and Courtney Owens were present for all five focus groups. Erica served as the second moderator and conducted member checks at the conclusion of each session. Courtney served as a note taker throughout each session, to ensure accurate data was collected. His notes were used for triangulation purposes during the data analysis process.

Upon completion of all five focus groups, the transcriptions were content analyzed for dominant themes using the constant comparative method. To ensure the validity of the results, the transcripts were content analyzed separately by two coders (Erica Odera and Courtney Owens). After initial coding, the two worked collaboratively to build consensus on the main themes to minimize subjectivity and ensure trustworthiness of the results. Their analysis was then peer debriefed by senior faculty.

Results

The following preliminary report provides a summary of the major themes emerging from the focus group discussions. All major themes are indicated in **bold** while subthemes are indicated in *italics*. Selective quotes were chosen to illustrate the themes. This is a preliminary report presenting the findings of only one set of data collected in the overall assessment of the PULSE Fellows program. Conclusions and recommendations will be offered in the final assessment report.

What being a Fellow means

Fellows were asked to explain what being a PULSE Fellow meant to them personally. Overall, Fellows felt that being part of the PULSE Fellows program provided them with a unique **opportunity** to have impact and work with great colleagues. It also helped **validate** the efforts some Fellows were engaged in previously as well as bestowing **prestige** on the Fellows.

PULSE Fellows felt that being a Fellow was a wonderful **opportunity** to *have a positive impact* on science education. One Fellow said, “It’s an opportunity, I think, to participate. We all care deeply, I think, about impacting undergraduate biology education. It is one of our main passions and [this] is an opportunity to actually make an attempt to change this or have an impact nationally... which is a rare opportunity.” Another Fellow said, “It is the opportunity to make a national impact. That, to me, means a lot.”

Being a Fellow was also an opportunity to *work with other Fellows*. One Fellow commented, “I think... what really blossomed out of it for me is the networking at lots of different levels. So, getting to know the people in this group and finding common associations and common ideas and visions was really... a great learning experience for me.” Another Fellow stated, “The networking opportunities to meet all of these fabulous and amazing, talented and committed people has been really exciting.”

PULSE Fellows also discussed how being chosen as Fellows **validated** some of the activities and initiatives they were engaged in before becoming Fellows. One Fellow said, “It kind of validated back on some of the things that I was doing. Because it was like, ‘Oh, wow. Other people are doing the same things I am.’” Another Fellow commented, “In a sense, this is kind of a validation of the work that we have been doing and not always has it been rewarded by your own colleagues at your institutions, but to be recognized that you are doing something valuable.”

Finally, PULSE Fellows felt that being chosen as a Fellow gave them professional **prestige** and recognition in the eyes of others. One Fellow stated, “It is almost like there is more influence because you have the title of PULSE Fellow. Some people pay attention to that.” Another commented, “I feel like I have more authority when I talk about Vision and Change or transformation... this gives you more weight when you say that this is part of a national effort.”

How being a Fellow has helped create departmental change

Fellows were asked to describe how being a Fellow helped them foster change in their home departments. Being a PULSE Fellow has helped the Fellows **foster discussions** amongst their departments and has provided them with **leverage** to push for change. It has also provided them with **motivation and persistence** to continue pushing for change in their departments when it proves to be a challenge. However, some Fellows admitted that being a PULSE Fellow has not changed how they act with their departments. Some mentioned they had **already been engaged in initiating change** before becoming Fellows, while others have **not been actively engaged in initiating change** due to constraints.

One Fellow described how she pushed for change in her department through **fostering discussions** when she stated,

I think for my department, we just had a conversation about looking at what we were currently doing and looking at the Vision and Change report to see what our areas of gap might be. So we did... we were able to start a conversation. And I think that we knew the report existed, but after I was selected to be a PULSE Fellow, we then decided... it is important for all of us to look at this and have a discussion.

Another Fellow described how being a Fellow allows for more **leverage** within her department. She shared “I think also being a PULSE Fellow has allowed me to expose my department in such a way that I try to leverage that to foster change.” A different Fellow discussed the ability to foster **motivation and persistence** to initiating change as a PULSE Fellow by commenting,

PULSE helped, at least for me, providing...in keeping me going. So there was a motivation...I think what PULSE gave me was just the persistence...I had the sense that others could do it, so we could do it. So, rather than just giving up, it gave persistence to me.

When discussing changing their departments, some Fellows discussed that they were **already engaged in initiating change** before becoming Fellows. One Fellow stated,

My department has been working on a project, a curriculum reform project for several years to try to implement the recommendations of Vision and Change and I wish I could tell you that participating has made some kind of difference, but it hasn't. I mean, if anything, it has allowed me to feel like we are moving in the right direction...it is affirmation.

However, some Fellows admitted that they have **not been actively engaged in initiating change** in their departments. One Fellow commented, “The time that I have spent in PULSE has detracted from my ability to do things at home.”

How being a Fellow has helped create institutional change

Fellows were also asked to describe how their Fellow status has helped them to initiate change at the institutional level in their home institutions. When it came to their home institutions more broadly, Fellows felt their participation in the program helped improve their **prestige and power** within the institution. For example, one Fellow commented,

I think in my university, I have already been partnering with some other people who are interested in change, but I think having the credentials...sort of being selected for this, made that easier in some ways. To, you know, kind of have people recognize that there is something going on, and again, give more credence across the university...Nothing is better for your status at your own university than being recognized nationally for something, no matter what it is.

Another participant described how being a Fellow has aided in **communicating with institutional level administration**. They said,

We have a new president and the new president was made aware of my participation in this and our department's change... [Now] the department has been mentioned a number of times. And so [that has given us] I won't say extra status, but recognition and now I think there is some peer pressure there, which I think is going to help us accelerate change a little.

Initiatives with the most promise

Fellows were also asked to describe the initiatives they had been working on as Fellows that had the most promise. Two initiatives stood out, **the regional networks/ workshops** and **rubrics**. Some Fellows felt the **regional networks and workshops** would allow conversations to take place in a face to face manner. One Fellow said,

The long-term change is going to come from these regional networks. That's what I really think. Because we, you know, we don't have the money to travel to Washington, DC, ...for training for, you know, a group of three people of faculty. That's just not realistic with our budgets.

Another Fellow said,



I would say that some of the lessons learned from our own experience that inspired the regional networks are really one of the most important outcomes. I think that we learned about the value of face-to-face meetings and having this real supportive group of people to share the process with.

Others felt the **rubrics** were tools to foster discussion with others and were a visual product that could be easily shared. One Fellow said, “The one thing about the rubrics is...they serve as a nucleus for conversation. And you can take those anywhere and get a conversation and it gets people’s attention in terms of where they are.” Another Fellow said,

I am enthusiastic about [what] the rubrics can bring about. A lot of people that I talk to say, ‘Well, I am willing to do something, but I need guidelines. I need written down things.’ And I think having the rubrics as written down rules so people can say, ‘Well, I can do that.’ I think that provides some baby steps for places that need to start from scratch. And so I am excited that those might actually pull things together for people.

Finally, some Fellows felt that **all initiatives were equally important** and worked together to foster vision and change. One Fellow commented, “I don’t see how you can really pick one of the groups out, I mean, the things are so synergistic...They all just kind of fade into each other and support each other.”

Attitudes about diversity within the PULSE Fellows’ group

Fellows discussed their **appreciation of the structure** of the PULSE program. Fellows felt there was a good *balance* of various types of institutions and that each type of institution had the ability to have an *equal voice*. One Fellow said, “I think all the groups, we tried to make sure that we had a balance of different institutions.” Another Fellow said, “I come from a community college and I was saying this to [name removed] last night, is that having us be here as equal partners...it’s very exciting to be included in that.”

However, there is worry that there are *not enough minority serving institutions* represented through the PULSE Fellows program. One Fellow said, “But hopefully we can broaden within the PULSE community...and that is where we are a little underrepresented, I think, in historically black or tribal colleges. I mean, we really don’t have that level of diversity in the Fellows as much as I think we should.” Another commented,

I have some concern though, about diversity with respect to ethnicity in this group. I don’t think there was enough. And I am concerned with how much we are going to be able to get buy-in from Hispanic and Black institutions, I don’t know. I am not real optimistic about that.

Fellows also discussed that being a Fellow helped them to **empathize** with others from different institutions that may have similar or differing challenges when it comes to implementing change initiatives. One Fellow stated,

You know, we came in thinking we were such different institutions and yet we brought up the same types of challenges for the challenge wall. On the other hand, I think we use language that separates us, sometimes. I am...and I really think it is just lack of awareness, but I am thinking specifically about when we were working on the rubrics at one point and I was writing some entries that talked about introductory versus upper level electives. And you know, it didn’t occur to me that community colleges just have introductory and so we can’t use that kind of a distinction. And so, it was learning ways in which our language unintentionally divides us was really insightful for me and to be much more inclusive in the way we describe our efforts.

Challenges

Fellows discussed the major challenges they had during their experience. Fellows had challenges when it came to **working together**, particularly managing different *personalities, leadership styles, and communication practices*. They

also had the challenge of managing the **time** the PULSE Fellowship demanded on top of their other professional responsibilities.

Regarding **working together**, one Fellow described the challenge of dealing with diverse *personalities*. He said,

My sense is that some of us rub others of us the wrong way a little bit and you know, in a one-year enterprise, you just might let that go. And so I think the challenge going forward is if there are disagreements that we sort of put aside for the sake of the group, are those going to bubble up and if so, how are we going to handle those?

Another Fellow described the challenge of diverse *leadership styles* when they stated,

I thought one of the challenges that I noticed was just the sort of being leaders among leaders...we didn't choose each other. So that was a real challenge, was how do we work together with a group of people that we may have never met before coming from everywhere in the country, from all the institution types, who are all used to being leaders?

Regarding the challenge of *communication practices*, many felt the conference call structure was a limitation and a difficult way to communicate. One Fellow commented,

I also found the monthly group conference calls...I mean, I didn't find them to be super effective. I guess that was a good way for us to at least hear each other's voices, but it was not a very effective way to have a meaningful dialogue.

Fellows also discussed the challenge of **time**, and that the opportunity to be a PULSE Fellow put high demands on their time. For example, one Fellow said,

And at times, we are talking about ten, twenty hours a week that we were putting into PULSE and it comes out of sleep, it comes out of vacation, it comes out of other things. It comes out of writing publications.

They also discussed feeling that the pace in which they were expected to work was not sustainable. One Fellow commented, "That pace is unsustainable. We were willing to do it this year because we were excited about what was happening and we wanted it to succeed, but I don't think any of us could survive at that level."

Summary of experience as a Fellow

Fellows felt their experience as PULSE Fellows was one in which they were able **network and make friends** with excellent colleagues. One Fellow stated,

I would say it is like joining a second family, right? It really is. Because we have to mutually support each other, but yet, you know, there are times when we disagree and we don't want to be around our family for a little while. But we always come back together...it's a different dynamic than what I am used to as an academic.

Fellows were also pleasantly surprised by being in a group of other leaders they were able to **trust** to produce high quality work and who they could reply upon. One Fellow said, "I can trust that someone else is going to handle it. I don't have to handle it all." Another commented,

It's...the first time in a long time I feel I work in a group where every single person is contributing and I don't feel like...oh my goodness, if I don't do all this then it won't get done. So, it has been really energizing to be able to work with a group of people where everyone is taking responsibility.

Fellows also discussed how being a Fellow was **intellectually stimulating** and challenged them mentally to create ideas and solutions to vision and change. One Fellow commented, “To be with this group of people who are likeminded, who are really smart, who know a lot, who are great resources, it has just been really intellectually stimulating.” Another said,

I have a hard time turning my brain off when I am with this group. I haven’t slept hardly at all since coming back and it happens every time we get together, my mind just continues to buzz with ideas.

Fellows also felt their experience led to great **professional and personal growth** that will extend beyond their PULSE Fellowship. For example, one Fellow said, “I would say that my experience as a Fellow has been very positive and one of personal and professional growth.” Another said, “It has been the most significant professional development thing I have done. And it has allowed me to take all the other projects I have been involved in and apply it in one place at a big level.”

Fellows also felt their experience in PULSE **inspired and energized** them to continue working on vision and change. One Fellow said, “It has been really inspiring to be part of a group that is doing amazing work and part of this national effort that I really believe in. So it has really been...it has been a very inspiring experience.” Some Fellows also felt that being a PULSE Fellow would help their academic careers and have an enduring **impact and legacy** on how biology is taught. For example, one Fellow said,

I am basically at the last phase of [my career]. And so for me, this may be the last big thing I get involved with and it has been wonderful working with people. It has also given me the sense that if we can bring this off, even if we can achieve half of what our aspirations are, this will be the best thing I have ever done.

Another Fellow commented in agreement when they stated,

So, for me, I think it has been a great opportunity to put a capstone on the work that I have been doing for years. And it is certainly an honor to have been chosen to do this and to think that I might have an impact that is beyond my own institution is a huge honor. It will make me feel like when I leave my profession that I left something behind. I made a difference.

