

Mentoring in STEM and the PAESMEM Program
February 27, 2013
2:00 pm CT

Operator: Welcome and thank you for standing by. Today's conference is being recorded. If you have any objections, you may disconnect at this time. After today's presentation we will conduct a question-and-answer session. I'll now turn the meeting over to Lauren Andersen.

Lauren Andersen: Hi everyone, this is Lauren. I work in the White House Office of Science and Technology Policy and I am here to welcome you to the webinar on the Presidential Award for Excellence in Science Mathematics and Engineering Mentoring. Thank you for joining us.

For me I'm really excited to be here today because as many of you know moving America's students from the middle to the top of the pack in math science and otherwise supporting young scientists and engineers is absolutely a priority of President Obama and the Administration at-large.

And the reason for that--largely, as many of you know--is because the President and the rest of the administration really see broadening - the goal of broadening the pool of qualified STEM professionals--as absolutely critical to our nation's economic competitiveness in future areas of high growth fields, as well as to our nation's public health and environmental well-being and sustainability in the long run. So this is something that the President views as absolutely essential with mentorship as a very important critical component of that. He has gone to great lengths to be sure that we are not just supporting folks who are out there in the trenches to do great work (such as yourselves) but to show that we're engaging federal employees in this effort and so he has called upon the 200,000 federal employees who are STEM professionals to

get out there and get their “hands dirty” with mentoring and with STEM activities.

This is why agencies like NASA, the Department of Energy and of course the National Science Foundation are doing so much to connect mentors in STEM fields to students who are looking to be inspired and who need the additional support to make sure that they are being retained throughout their years of schooling and well into the professional workforce.

And along those same lines one of the things that the President sees is really important in this entire encouragement of STEM mentors and recruiting more folks to STEM fields is certainly making sure that those who are doing outstanding work have the recognition that they deserve.

And to that end many of you may know each year the President recognizes winners of the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM recipients as we like to call them.)

In the oval office he greets and meets with them, and has said that they are a great example of folks who have gone the extra mile, made the extra commitment and deserve the extra recognition for the work that they are doing to make sure that we are supporting these young scientists and engineers.

So we're really happy that you could be with us here today to learn a little bit more about the PAESMEM program, and receive details as to how you can apply since the [2014] group is now open.

And so I just wanted to start by telling you a little bit about the PAESMEM program for those of you who don't know. It was founded in 1995 and since that point has recognized over 240 outstanding mentors.

And these are mentors who have gone above and beyond in science, technology, engineering and math mentoring and particularly engaged with students who come from historically underrepresented populations. The award really speaks to the point of mentors as the engine and catalyst to make sure that we are broadening the scope and broadening the pool, and bringing new people into the STEM profession who have not historically been engaged, but are tremendous sources of talent and creativity that need to be tapped in order for us to continue to excel in the scientific and technological enterprise.

So that is quite exciting. Each awardee -- just to give you a sense -- receives \$10,000 as an honorary award and very frequently has the chance to meet with the President. Awardees are also engaged throughout this process in giving feedback to policy makers such as ourselves here at the White House Office of Science and Technology Policy, and connecting to a broader network which is quite exciting.

So that's a bit of an overview. One very important and relatively new note about the PAESMEM program is that in addition to being open to nonprofits representatives and folks from Academia, this program is also now open to federal employees and the private sector.

And this is something where we're really excited to expand this breadth of potential nominations. This is something that is relatively new. We've been trying to build the private sector and the federal sector applications for a while now-- in addition to the amazing other 240 folks that we have recognized

So we really look forward to your help and we hope that this webinar is really informative and that you can take this back to your communities and encourage everyone and anyone you know who's qualified to apply.

And so with that I'm going to turn it over to a great example of a group who's already doing tremendous work in the mentoring field in STEM. And just take the time to say thank you once again for joining us.

Colin Lacy: Thanks very much Lauren. Hi; this is Colin Lacy. I'm calling in from Citizen School and I want to thank Lauren and Jessie for providing us the opportunity to just quickly share some of the impacts that STEM mentors are having within our program.

They're really the backbone of a lot of what we do. And so I know a lot of folks on the line are coming from places doing a lot of exciting work and I know you'll hear from Jessie shortly about specifics of the PAESMEM program.

At Citizen's School we implement an extended learning day model in low-income public schools across the country. So we have partnerships with schools in 15 different districts in eight states and we are engaging over 2,000 mentors coming from the STEM profession.

Often times it's easier to visualize our model by seeing the calendar. On your screen there at the end of the normal school day our teaching fellows (who are AmeriCorps members) come in and they provide extra academic support to our students.

And then the real official ingredient of what we do is our apprenticeship. Students select two apprenticeships each semester and these are taught by an individual mentor or a team of mentors coming in once a week to share the work that they love.

For example, Google engineers are coming in and they are teaching students to build smartphone apps and even program their phones to move a robot.

Merck researchers teach students about CSI Crime Scene Investigation Units and kids learn how to check fingerprints and DNA.

Microsoft designers come in and they teach video game design. And all of these apprenticeships, and many others, are providing students with the moments of discovery that can open up previously unfamiliar paths.

And at the end of each apprenticeship we do a survey and we're finding that across our networks over the last several years over 80% of students are expressing an interest in a STEM career after being mentored for a semester.

And this compares to just 30% of eighth graders expressing interest in STEM careers as evaluated on the ACT testing surveys. And to share a telling example I would like to talk about, McCalvin Romain. He was a sixth grader at the Deveron McCormick School in Boston and he was, in his own words, too cool for school and coming from a low-income family not interested in math or science--and scared of public speaking.

He enrolled into different schools and to an apprenticeship with EMC where McCalvin was exposed to Electrical Engineering. In sixth grade he had his moment of discovery when he turned a blow dryer into a flash light and he went on to study information systems at Boston College.

And he now works for EMC and he in turn mentors middle school kids to discover the power of math and science. And in this country we just don't have enough McCalvin's and we don't have enough students experiencing those moments of discovery.

Otherwise we wouldn't have two jobs for every one STEM professional. And the challenges are really starting in school as most of the folks know on this call. The United States has ranked 26th in Science and 31st in Math.

And schools we know don't want to solve this problem alone and they partner with countless non-profits and education agencies ready to engage people as mentors and tutors and coaches.

And so the demand is there and what's really needed is more supply – a greater supply of mentors from industry willing spend not just one day a year at school but rather willing to spend an hour each week - week after week.

And--very importantly--mentors who are ready to engage in the act of doing and making. As John Holdren -- Lauren's boss -- the Director of the White House Office of Science and Technology explains -- you wouldn't teach football from a textbook and the same thing applies with STEM.

With this analogy in mind I want to quickly share and mention the new organization that's emerged from a White House sponsored effort to generate big innovative solutions for the STEM education challenge and that's America 20/20.

America 20/20 is a new organization with a vision of engaging one million STEM professionals to mentor and teach students in kindergarten through graduate school providing millions with the same uplifting moments of discovery that McCalvin had through real-world, hands on projects.

And so there's a community that's forming and they include support from government offices, best-in-class STEM corporations, and best-in-class STEM mentoring organizations.

So for any folks watching this, and who work for or volunteer for organizations that are using STEM mentors, we would love to connect with you and share more about this program as we start to build a community of education partners.

And with that I'd just like to say again a special thank you to Jessie and to Lauren for the invitation to share some of our work and to share some of the work that we're going to be doing with America 20/20--and to the OSTP and NSF for consistently recognizing the value of STEM mentors through the Presidential Award.

At Citizen Schools we know that STEM mentors can play a pivotal role in helping to ensure that the pipeline is more inclusive and more extensive. And we are very grateful to be part of the conversation with all of you. So thanks very much.

Jessie DeAro: All right, thank you, thank you Lauren and Colin. Good afternoon to everybody. As Colin has just described we can clearly see that there's a lot of outstanding mentoring going on in the country because of the work of a lot of very dedicated mentors and great organizations like Citizen Schools.

And as Lauren mentioned in her introduction, PAESMEM is all about recognizing those individuals and organizations for the work that they've done with a Presidential Honorary Award. I'm fortunate to be working at NSF with the PAESMEM program and I wanted to give you a little bit of information about the details of the program. Before I do that I wanted to remind you that PAESMEM is focused on mentoring in STEM, which is different from role modeling and teaching.

Mentoring is typically more of a long-term and sustained relationship between the mentees and the mentors. And it can include many phases of development and training including sharing of knowledge as well as experiences and advice.

Whereas role modeling is usually a shorter and infrequent interaction—although critically important-- it is different from mentoring. STEM teaching relationships are also different from mentoring--but also critically important.

In fact, there is another Presidential Award Program that recognizes the important work of K-12 STEM teachers called the Presidential Award for Excellence in Math and Science Teaching which is also managed by NSF which we can share information with you if you're interested.

So for now I'm going to go over some of the details of the PAESMEM program, including eligibility, the nomination process, and preparing and submitting nomination materials. Afterwards we'll do a Q&A with the participants.

Eligibility for PAESMEM: individuals and organizations in all public and private sectors are eligible. Individuals and organizations may come from industry, academia, primary and secondary education, the military and the government, nonprofit organizations and foundations. Government employees at state and federal levels may want to check with their organizations for any kinds of restrictions on their eligibility; but that is ultimately up to the regulations that govern your position, but they are eligible.

Individual nominees must be U.S. Citizens or permanent residents (past awardees are not eligible for re-nomination) and organization nominees must be affiliated with a U.S. Corporation, an educational institution or agency, a military or government agency, a nonprofit organization or a foundation. Past organizational PAESMEM minorities are eligible to be re-nominated after 10 years from the first award.

These awards are designed to recognize individuals and organizations that have at least five years of demonstrated exceptional mentoring of underrepresented students, trainees and/or early career scientists and engineers.

The underrepresented individuals are from groups that are not currently participating in STEM education and the STEM workforce at levels that reflect their population in the country.

These groups include women, people with disabilities, underrepresented minorities as well as individuals from low socio-economic backgrounds, and some geographic regions such as urban and rural areas.

So now I'm going to talk about the nomination process. Both self-nominations and nominations are invited for the program. If you're interested in nominating someone, we recommend strongly that you work with the nominee because of the nature of the nomination materials; the nominee really needs to be involved in the development of the content.

We recommend that if you offer to write one of the letters of support for your nominee to help them complete the materials. Alternatively, if you prefer to remain anonymous, you can send us your contact information for the nominee to PAESMEM@nsf.gov and we'll invite them to submit materials.

But do this well before May 5th so that they have enough time to prepare a strong package of materials before the deadline. Self-nominations are accepted and all you need to do is submit the materials by the deadline. There's no need to notify NSF of your intentions.

The nominations are due by June 5th at 6 pm your local time and, unfortunately, incomplete packages and unreadable electronic files will not be reviewed which is why we encourage you to submit early. If there is time for us to identify a problem we can get back to you before the deadline to correct the problem. But if you submit on the deadline, we won't have the ability to do that.

All of the instructions on how to prepare the nomination materials and a FAQ on the program as well as the PAESMEM certification form that needs to be signed and submitted are available on the website at [nsf.gov/PAESMEM](https://www.nsf.gov/PAESMEM).

And I'm going to briefly talk about what's included in those materials but there are more complete instructions in the dear colleague letter that's inviting nominations.

So all individual and organizational nominations must include a signed PAESMEM certification which you can download from the website and also the content of the nomination packages [is] listed here and described more fully in the instructions on the website.

Organizational nominees will include a one-page description of your organization; individual nominees will not include this section. Both individual and organizational nominees will include a statement on their mentoring philosophy. And this is where you would articulate why you believe mentoring is important, why you do it, why it's important to STEM and perhaps what are your guiding principles for guiding you in your mentoring as well as other information you'd like to communicate about your mentoring philosophy.

The next section is the six-page description of your mentoring activities that you have implemented including how many years you've done that work and how many mentees you have contacted and impacted with your work.

This is where you would also explain why you have chosen to target the [mentees for] your mentoring work - whether or not they are students or trainees, or early career scientists and engineers, or from different geographical regions, low social or economic backgrounds, or any of the other underrepresented groups with which you might be working.

For individual nominees it's important that you delineate your achievements as distinct from the achievements of the organization or the corporation that you work for.

And for organizational nominees it's important that you write this in terms of the organizational program that you're nominating rather than from the perspective of the leaders of the organization or from the organizational representative.

The next section that would be included in the materials [is] the letters of support and you're expected to include at least two; and you can include up to five letters of support. These can come from mentees who have participated in your programs or from colleagues who are familiar with your mentoring work. And if you have any questions, please don't hesitate to ask.

The final piece that would complete your nomination package is a two-page resume or CV for the individual nominee and resumes/CVs for up to five organizational representatives for the organizational nominee.

All the submission instructions are on the PAESMEM website but essentially you'll be packaging all of this material and sending an email to [mentor@nsf.gov] including the word **nomination** in the subject line. When you do that you will receive a note that says we have received your nomination package in time for the deadline. But it does not confirm that the materials were readable or that it's complete. So the receipt notice is only that we have received it. Again, that is another reason for you to submit early so that we can contact you if there is any technical problem or anything wrong or missing from your material. This concludes my brief overview of the award program.

And we recommend that you review the complete instructions before you submit your materials. You can always ask questions if anything is unclear by sending an email to PAESMEM@nsf.gov.

I thank you for your time. I thank Colin and Lauren for their time to participate today to help us get the word out about this award. We're now going to open it up for questions and answers and the operator will give you instructions on how to do that.

Operator: Our first question comes from Emily Fischer, your line is open.

Emily Fischer: Hi Jessie, I'm on the Leadership Board of the Earth Science Women's Network and I'm interested in nominating this organization—and we may nominate members of the Board as well.

But from an organizational perspective, I think the organization meets all the criteria except for the affiliation. So all the Board members are affiliated with universities and we're in the process of forming a nonprofit.

But we aren't really technically affiliated with one specific organization because the group has grown really organically. So do you have any thoughts on that or is this something I should email you specifically about?

Jessie DeAro: Right. It actually sounds like would be eligible. I've highlighted [the affiliation with a U.S. organization to ensure that it is a] U.S. entity. So it sounds like you are located in the U.S. and that's where you are based. So that is really the requirement that we're looking for.

Emily Fischer: Oh, okay. So - so that we are affiliated with many different U.S....

Jessie DeAro: That's right.

Emily Fischer: ...organizations is fine. Okay, great thanks a bunch.

Operator: Next we have (Shereen Salimnia), your line is open.

(Shereen Salimnia): Hi Jessie, thank you so much for hosting us and for all of the information. You mentioned the K-12 educator awards; can you give us some more information about that?

Jessie DeAro: I can sure. It is also a Presidential Award and it recognizes middle and elementary school science and engineering teachers, and it is also managed in this office. So I can definitely send you the link to that. You could also get to it by going to nsf.gov and searching for “Presidential” and “teachers” and I’m sure it will come up. The acronym is [P-A-E-M-S-T] which is another federal acronym that we all enjoy. So if can’t find it just let me - send me a note and I’ll send you the link.

(Shereen Salimnia): Great, thank you.

Jessie DeAro: My pleasure.

Operator: We have no other questions in queue at this time.

Jessie DeAro: Okay. So that fits well with our 30-minute expectation for the webinar. Thank you for your time and participation today and we hope to see some nominations coming from you. Thank you.

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