

**PSC-ED-OUS**

**Moderator: Khalilah Harris  
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4:00 pm CT**

Coordinator: Welcome and thank you for standing by. At this time all participants are in a listen-only mode. After the presentation we will conduct a question and answer session. To ask a question please press Star then 1.

This call is being recorded. If you have any objections you may disconnect at this point.

Now I will turn the meeting over to your host Ms. Khalilah Harris. Ma'am you may begin.

Khalilah Harris: Thank you (Rena). Good evening everyone. I'm Khalilah Harris, Deputy Director of the White House Initiative on Educational Excellence for African-Americans.

And we are so delighted to bring you the next installment in our monthly Webinar series.

This month we are honoring National Computer Science Education Week. And the focus of tonight's discussion is supporting African-American students

interested in STEM cells but more specifically African-American men such that they're able to be into STEM fields and persist through their degrees.

We are going to be kicking off the discussion with Dr. Marvin Carr. And Dr. Carr is a Policy Advisor for Stem Education Innovation and Diversity with the White House Office of Science and Technology Policy. He's going to be discussing federal investments in supporting men of color in STEM degrees and STEM careers.

So I'm going to turn the call over to Marvin Carr. I'm also going to point out that some folks have asked about a hashtag.

So if you want to live tweet the discussion you're more than welcome to. Use the hashtag at asamedchat that's hashtag asamedchat.

You can also feel free to tag any one of the participants while we're talking. Our Twitter handle is @asameducation. And with that said I'm going to turn the call over to Dr. Marvin Carr.

Dr. Marvin Carr: Good evening everybody. As Khalilah said my name is Dr. Marvin Carr. And I think I want to start the conversation off first by giving a little bit of background.

I'm 28 years old. I graduated from Morgan State University in Baltimore, Maryland both for my doctorate and my bachelors in electrical engineering.

And as a 28-year-old in science and technology African-American I often like many of those on the call are the only person of color and the only person of color in the room be it academically or professionally.

And I'm a - when I think about why that is you always - you often hear the issue of a pipeline. Pipeline issues generally are supported by what are structural problems.

The problem with that I guess from a practitioner's standpoint is that this is much more a problem much larger than plugging it with - plugging the holes in a pipeline.

And so I kind of always start these calls with an analogy. You can have a perfectly brand-new pipeline, just got all the metal and pipes from the Home Depot inside of a crack house, right.

If the, you know, at the end of when the water finally comes out of the pipe, you know, who's there to use it? Who wants to be inside that kind of an environment where nothing really matters right?

If we continue to work on our problems on top the context of which the problem lives in we're really just exacerbating the issues writ large.

And so I generally want to talk about and if Khalilah you want to chime in when my time comes to a close basically three things. What is the role the federal government can play particularly, you know, the Obama administration can has play on really advancing broadening participation in STEM and science and technology for all students but specifically for young boys, for young men of color, and young African-American men.

The second thing is what's going on in the private sector? And then the third thing is what are the opportunities that exist and how can students take those and young men of color take those opportunities?

I think we all know that the President is very, very, very - has long been a proponent for STEM education. Never was that more apparent this year for me.

I graduated this year from Oregon State. For the first part of the year from January to June I was an intern, an unpaid White House intern for that.

But one thing I noticed that everywhere - every time I saw the President when he talked about opportunity those opportunities were usually tied to jobs in the tech and in the STEM sector.

And as I look at what were the policies in play that the President was giving those policies all of them showed great support for young boys for young for African-American men, particularly for younger students.

So I'll just start with a couple of those policies. The first one I think that's going to be great support here is a policy called Tech Hire right?

And so Tech Hire not only allows for cities and schools and counties and states to offer tech training to young people it also will connect those students to jobs.

And I think that's one thing about STEM that's often mixed right? STEM there is no career you can get called STEM right, like a plumber or electrician, like you can't go get a STEM job.

And sometimes we just, you know, cram things into STEM. So I want to be in STEM. Well you can be a scientist, a technologist, an engineer, a mathematician or someone who uses all of those things.

But what's important I think there is so many for so many in our community it may seem plain for us on the call what STEM is but there's some folks who still think I'm talking about STEM cell research when I say STEM.

But it's important for us to really know what we want to do.

Well Tech Hire allows for Tech Hire allows for us to connect skilled young people to jobs, sort of kind of the first investment.

The second one is something I think is going to be very, very important to the president and that is in his overall investment in STEM. Billions of dollars, billions of dollars have been invested and through the Department of Education through many, many, many different federal agencies particularly through the My Brother's Keeper Initiative.

Because last year in response to a reaction and response to what happened in Florida, you all know STEM - in Florida and Trayvon Martin the administration response was to enact a new initiative a new because the initiative was called the My Brother's Keeper Initiative.

MBK really had six goals. And it was pretty much how do we create a pathway of opportunity for young boys, for all students but especially for young men of color?

And so what we're working on these days in the administration is okay how can we connect into actual opportunities so real life generationally changing opportunities?

And one of those ways is through STEM and entrepreneurship. And so the administration's going to be talking about several different plans and several different opportunities over the next several months.

So all around what are the opportunities for young people in STEM right in four particular buckets? The first bucket is exposure.

For myself, a young guy growing up in the projects of Detroit, there were no engineers or scientists, you know, in the year 2000, 2005 that I aspired to be like that looked like me.

Not only that there were very few scientists of - scientists or engineers of any color in (River Roots), Michigan or in Detroit, Michigan.

And so by exposing more young people, more boys of color to the opportunities that exist in STEM and computer science through places like our national laboratories, through places like training activities at urban libraries we could actually allow kids to be able to see what they look like as STEM or scientists and engineers. We can expose them to the opportunities that exist in the country.

The second layer it is kind of a dual track. And I must be very honest I had some - some time trying to wrap my head around this dual track of training and education.

So how can we pick those kids from K to 12, how can we truly give them opportunities and have them think about first doing STEM pursuing entrepreneurship? What are the federal investments, right?

Not only scholarships but also what are the programs, what is the programming through My Brother's Keeper and do other agencies that exist on the ground in local communities that can help inspire an entire generation of young people and (chart) an entire generation of young boys of color to pursue STEM and to higher education?

But then that's kind of my - what I call (the my boys in push). But then I understand that there's an entire group of individuals. We call these folks disconnected youth, like these young people who are in juvenile detention and people who are in prisons and people who are - who have dropped out of high school who may not have the - they may have the ability and the desire to pursue those types of opportunities but they don't have - there are structural issues that (unintelligible) from that.

And so how can we give them opportunities to actually benefit from what STEM education can give them? That's through things like, you know, through booting - holding boot camps and just do alternative methods of training that can really support them.

And lastly of course there's a huge investment that the President is doing around media bias right? What ways does the music does Hollywood just the greater entertainment industry affect the way that our kids think about themselves right?

Why does a young black girl feel like she can't be an engineer (unintelligible)? Why does a young black boy dis-identify from academic and being an engineer someday as a (unintelligible) form of achievement?

And so these are just a few of the examples of all of the ways that this President is impacting STEM education on the - and they're impacting the lives of young boys of color all over the country.

For all those on the call I would reach - I beg and I suggest that you reach out to your local My Brother's Keeper Initiative.

Over 200 cities have taken on the MBK pledge and see how can I be involved in preparing more young men of color for STEM education.

Khalilah Harris: All right thank you Dr. Carr. We've heard your charge loud and clear -- appreciate the feedback.

And Dr. Carr is going to stick around for a Q&A till the end. So if you have questions for him about something specific he said including Tech Hire or other initiatives from this administration please jot those down and hold on until the end of the call.

The balance of this Webinar is going to be held by Doctors Luke Wood and Frank Harris out of San Diego State University.

They are the co-directors of the Minority Male Community College Collaborative. Did I get that right? I don't know...

Man: Yes.

Khalilah Harris: ...(unintelligible) thank you. All right I always want to say cooperative but collaborative great, even better.

I'm going to turn the call over to them and they're going to talk more about how we support African-American men persisting through STEM degrees and focus their discussion a bit of the community college space. But we know that that is transferable to any postsecondary institution.

So with that said I'm going to turn the call over to Drs. Frank Harris and Luke Wood.

Dr. Frank Harris: Good evening those of you joining us on the East Coast and good afternoon to those of us who are here on the West Coast.

I want to thank you for joining us. And I want to start by saying that Dr. Wood and I are honored to collaborate with the White House Initiative on Educational Excellence for African-Americans and humbled to present this work on behalf of the African-American men who are pursuing STEM degrees and educators who work tirelessly to support them in doing so.

We'd be remiss if we didn't acknowledge Khalilah Harris and her leadership in bringing this Webinar to fruition as well as Kenya Goods who did amazing job of coordinating our participation.

And finally I think it's important to note that the work that we do here at M2C3 is supported by a talented group of STU graduate and undergraduate researcher who are committed to educational (equity), so thank you for that.

To provide a little bit of background about M2C3 for those of you who are being introduced to us for the first time we're a research and practice center that's situated in the College of Education at San Diego State University.

And we launched this effort in 2001 with the goal of building capacity within community colleges to serve men of color, you know, in particular black, Latino, Southeast Asian, Native American, Pacific Islander and men who've been historically underrepresented and underserved in education.

But to build capacity to serve these men equitably and responsibly upon recognition at community colleges and the men that they serve, the men of color that they serve were not at the core of the national dialogue in efforts to improve educational pathways and success for boys and men of color.

So towards this end we're engaged in a range of scholarly practical and policy efforts. And we do all the we can to serve as a resource for community colleges across the country having partnered with more than 100 colleges since the year 2011.

I also think it's important to mention that we represent the community college and workforce perspectives on the rise for boys and men of color advisory board, rises an effort that was launched by more than 40 private foundations who came together to form the executive's alliance to expand opportunities for boys and men of color which of course is in line with President Obama's My Brother's Keeper Initiative.

So I've been provided that background in context. I'm going to turn it over to Luke who's going to share some important data points to help ground our discussion, the discussion that we'll have for the rest of the Webinar. And then I'll be coming back on the call just to pick up where Luke leaves off so thank you.

Dr. Luke Wood: Okay. What we'd like to do is give you some context as to who are our black men in college with a focus on characteristics from those in community college settings.

Given that our work focuses on men of color as a whole we're also present some information on this slide that you can see this respect that deals with the Latino male population.

So to begin there are 947 public two-year institutions in the country. These institutions serve as the primary pathway into postsecondary education for men who have been underrepresented, underserved and under supported in education.

For example as you can see 64% of black men and 65% of Latino men enrolled in public postsecondary education are situated in the community college context.

So not shown on this graphic here these numbers are slightly lower than STEM with 51% of black male and 56% of Latino male STEM majors in public postsecondary education enrolled in community colleges.

There's two key points that we can take from that. First the majority of men of color STEM majors in public postsecondary education are actually in community colleges. And second these men lack proportional representation in STEM majors suggesting an area of growth that can capitalize on to enhance these STEM pipelines.

Here's some other key facts that we know about these men of color who are STEM.

A high percentage 48% of black men in STEM delayed their enrollment into college. For those who did they waited on average of five years so five years delayed enrollment on average.

For community college educators this probably is understandable as you're used to seeing this kind of data. But given that the - especially given that the average age of a black male in STEM is 28 years old.

As a result educators should not be surprised that 48% of these black men are in need of developmental or remedial education. For example imagine taking an algebra test five years after you last took math in high school.

In addition we know that many of these men are first-generation college scorers, 70% of black men and 83% of Latino men half are low income and as a result a large percentage are working which explains why 53% of these men are enrolled in college less than full-time.

Now that we have a little bit of context, let's look at some of the outcomes for these men and their representation in the key STEM disciplines.

So here we report data on this slide from the beginning postsecondary students' longitudinal study. This study does it attracts college and university students during their time in college.

It begins when they first enter college and then follows them over a three year timeframe and then over another three year timeframe for a total of six years of tracking.

Based on the cohort from this data you can see that 14.5% of black men majored in the STEM field. Most of these men 71% identified STEM as a major early on, in this case year one.

This is an important point we believe because that means that these men made decisions early on about entering the STEM careers which suggests that bolstering the pipeline in STEM must occur early on either during their transition into community college or doing - during their first year in college.

After this we can see that roughly 14% of the total population of black men in STEM will enter the field in years two through four and then after year four.

We also know that their representation in the STEM pipeline is concentrated into certain STEM fields with the majority of black males STEM majors in computer and information systems, engineering and engineering technology and then in biology and biomedical sciences.

However while a reasonable percentage of black men begin as STEM majors declaration of association in STEM and success in STEM are two very different things.

For example we know that only 25.8% of these men will actually stay in STEM. For those that leave we can see that half, 52% will simply drop out of college leaving without return and the other 47% will transition into different majors.

Given these data it should not be surprising that community colleges struggle to facilitate the success of black men in STEM. In fact as you can see on the slide highlighted in green only 18.5% of black STEM majors, male STEM

majors will complete their goals either earning a certificate a degree or transferring to a four year college or university in a six year timeframe.

In other words for every ten black men in STEM less than two will complete their STEM goals in the community college.

Obviously this has stark implications for the subsequent pipeline for these men and four year colleges and universities. But these numbers we believe are indicative of the challenges and environments that black men experience across all institutional sectors.

Now I'm going to go ahead and turn it back over to my colleague Frank.

Dr. Frank Harris: Thank you Luke. We think it's important to recognize why there is a need to focus on African-American men in STEM and there are several reasons that we'd like to share.

First we know that African-American men by virtue of their experiences prior to matriculation to college have a set of assets that can be leveraged to facilitate their success.

For example we know that these students have overcome significant academic and personal barriers in order to enroll in postsecondary education particularly those who are in their mid-20s and are enrolled in the community college.

And this indicates a high level of motivation and resilience.

Second, we know that these students have responsibilities and commitments outside of school that provide meaning and purpose to their educational pursuits beyond earning a credential or pursuing a career.

Third, we also know that African-American men often cite serving as a role model in their communities and families as a primary reason for their wanting to pursue postsecondary education.

And finally the lived experiences that African-American men bring into the classroom context can be value-added to the learning and development of all students in that space.

Yet despite the aforementioned assets that African-American men bring with them to the learning context that could be leveraged to facilitate their success they also experience unique challenges that must also be mediated.

First a critical mass of African-American men report having K to 12 experiences and relationships with educators that have been less than ideal and have in some ways negatively shaped their dispositions towards schooling, external life pressures and commitments related to employment, family responsibilities and transportation can negatively affect African-American man's focus and commitments in school.

Racial gender stereotypes that depict African-American men as lazy, unintelligent, disinterested and incapable of learning often have a negative effect on how educators teach and serve them.

And finally African-American men that come from low income backgrounds are often educated in K to 12 schools that are under resourced and lack the capacity that is necessary to prepare them for postsecondary education and success in STEM.

So with that said we'd like to shift our conversation to some insights that we've gathered from both students who are enrolled in STEM courses and faculty who teach them regarding some of the embedded issues and challenges that impede their equitable participation and persistence in STEM fields.

Through our work at M2C3 Luke and I have had the opportunity to engage in a range of data collection efforts with many of our partner community colleges.

And some of these colleges have invited us to speak specifically where men of color in STEM courses.

Add through this work we've identified a set of barriers that consistently emerge from our conversations with students, barriers that can be categorized as first external which are those that are situated outside of the college but have an adverse effect on their engagement and full participation in classes.

Second, is structural which are those that are embedded in colleges, department classes and other structures or systems that are not structured in ways that best facilitate student success for black men in STEM courses.

Curricular which speaks to the teaching and learning strategies that are employed by faculty who teach them courses.

And finally perceptual which reflects perceived incapacities that are held by students about their faculty and their ineffectiveness in teaching them and their perceptions about students that are held amongst faculty regarding why black men have not been successful in STEM courses.

Key point we'd like to emphasize here is this. Students are not solely responsible for their success or lack thereof in STEM courses or STEM fields.

From our perspectives college leaders and faculty play a tremendous role in shaping the institutional and classroom ethos in ways that are conducive to African-American men engagement and success within them.

Far too often students - student deficits are assumed to be the reasons why men of color African-American in particular are not successful in STEM courses.

So recognizing the important role that institutions and faculty responsibility play in the success of African American men in STEM we've developed a taxonomy of faculty perspectives that best captures what we've seen in our work.

The first group which is situated at the top right are those that know culturally relevant practices know which practices to employ and are willing to do so on a consistent basis.

The second group which is situated on the top left does not have the technical insights regarding knowing what practices to employ but has a willingness to learn and employ them.

Our third group on the bottom left this is what we describe as our don't know and don't care group. They do not have the knowledge about teaching and learning practices that best serve African-American men and they have no desire to learn or employ those practices.

And our fourth group which is situated at the bottom right has the knowledge and the capacity to employ effective practices but do not necessarily have the willingness or desire to do so for men of color or other minoritized groups.

And we have affectionately describe each of these groups as the acquire, allies, resisters and defiant.

Now acquire they've been trained in how to effectively teach African-American men and other underrepresented students. They already employ those practices and actively advocate for others to do so as well.

They attend all the professional development meetings and continue to hone their practice. And this group is often comprised of but not always of faculty of color which underscores a (unintelligible) - which underscores the importance of having faculty who represent the population that they're serving.

Our second group are the allies. They have not been trained or adequately trained in how to effectively teach African-American men and underrepresented students. However if there were they would be strong allies and advocates for these students as they already possess the desire to be.

And this group is often comprised of majority faculty who or perhaps liberal leaning.

A third the resisters have not been trained in how to effectively teach African-American and underrepresented students. And even if they were they would be unwilling to employ those practices in general and employ them for African-American men in particular.

And they can actively or passively resist change and they're often motivated by colorblindness and a belief in a meritocracy.

Our last group, the defiant. This group has been trained in how to effectively teach underrepresented students. However they refused to implement those practices for students in general and for African-American men in particular.

And they can also actively or passively resist changes. And again this is also a group that tends to be motivated by a belief in meritocracy or, you know, just the understanding or the assumption that it wouldn't be fair to do so for a particular groups.

And with that I am going to transition it back to Luke who is going to take us through some of the recommendations that we have for serving black men (unintelligible).

Dr. Luke Wood: Okay so what we've done is we've identified a number of recurrent recommendations from the scholarly literature that can better support black men in STEM and community colleges and in other postsecondary institutions.

The data that we're going to present or the findings that we're going to find from those recommendations are based upon work that we've done on this population with black men in STEM and underrepresented students of color in STEM as well as just reviewing the greater research literature from this population.

For those watching this webinar we also recommend reading the book STEM Models of Success Program Policies and Practices in Community Colleges that I edited with Robert Palmer.

So here's the first set of recommendations are those that pertain to recruitment. So cross post-secondary education we know that colleges are oftentimes concerned with how do we recruit more black men into STEM fields?

And the colleges that we had seen have been the most successful in doing this are colleges that have done so by beginning early on using the dual enrollment programs during high school to spur student's interest in STEM.

And these - what we like to think about is how can we reach those students early on and connect with them in ways that are meaningful?

So in using like dual enrollment programs we have an opportunity for a faculty member who's at a community college to engage with a student in high school or for a student in high school to be enrolled and attend classes at the community college. That's ample and prime time to be able to create opportunities for those kind - for interactions of facilitate their interest in STEM.

We also know that there has been a proliferation of high schools that are science-based or tech based that can also be leveraged for that.

We also see in the literature where the - where there's been recommendations to create an academy that familiarizes family and community members and students about STEM, not just about STEM fields but also about the process of matriculating through a college in terms of financial aid, in terms of admission, in terms of all those important things. And we think that that's obviously a critical component.

Having black men majoring in STEM serve as ambassadors to students for those who are engaged in outreach orientation or those initial processes that students go through, being able to see those students early on particularly those students who have positive experiences can be very powerful for students who have been taught and socialized not to perceive STEM as something for them as noted by Marvin Carr.

We also think it's important to have diverse faculty attend recruitment events. So this goes back to the importance of having faculty, particularly faculty of color who can be - who can serve as visible role models for these students.

In some cases there's going to be colleges that don't have that diversity. So if you don't have faculty of color than leveraging those faculty members who have a proven record of success and commitment to supporting and advocating for diverse student populations.

Advising and counseling, we think that's another critical area to focus on. Advising should highlight the connection between academics and future economic stability.

As mentioned by Dr. Harris we have identity factors and non-cognitive factors that we need to take into account. And we can leverage that information as part of that initial advising process recognizing that many of these men want to perceive their degree as being useful in terms of becoming providers and breadwinners for their families and for those who they care for.

Gender identity built in the program serving men of color or the program serving students of color in STEM. We can't talk about men of color without talking about the fact that they are men and they are of color. And we recognize that there are factors that are unique to this population.

Dr. Harris mentioned the notions of breadwinner orientation, health seeking, perceiving school as a domain that's not suited for them. These are factors that must be taken into account and built in the programs so we can leverage positive messaging to encourage students to perceive STEM as something that's for them.

And truth of advising practices touches upon that. We know that again for many of these students they're apprehension - apprehensive about engaging in the classroom, they're apprehensive in about engaging and advising.

And there's reasons for that. Some of it deals from - with racial and gender stereotypes. Some of it deals with their socialization where they've been perceived, they've been socialized as men not to seek out help.

So if it's something that's critical, if it's something that's important for the population we should no longer consider making it voluntary. It should be mandatory. And that's a good strategy that we've seen be useful in working with and educating men of color.

In addition to that a lot of the recommendations that we have are really organized around professional development or faculty and staff.

And there's some key reasons for that. Based upon the work that we've done in the research that we've done it's repeatedly pointed to the fact that faculty members are and adequately prepared to teach and work with students in particular with men in color.

Most faculty members are subject matter experts, not necessarily experts in teaching and learning and how to facilitate certain interactions in classrooms that can support student success.

And we think that this is important because the research that we've done has repeatedly pointed to the fact that the faculty predictors of their involvement in - with students are the most likely to lead to their success.

For example we know that with engagement of in and out of the classroom the students who feel welcome to engage, students who feel a sense of belonging with their faculty are those who are most likely to do so.

In terms of achievement the strongest predictors of achievement of students receiving validating messages from faculty and this is specific to research that we've done with black men in STEM.

So therefore we have to think about how can we better prepare faculty members to work with the students? And when we say faculty we mean all of those who are engaged in the (instructional) enterprise with students. So that can include full-time faculty, part-time faculty and even those who are engaged in tutoring. And here are the different things that we think they need development in.

Culturally relevant science instruction that grounds with they're learning in the classroom with their lived daily experiences, activities that help them to engage in and to build a STEM identity, practices for in and out of classroom engagement.

Again from the work that we've done we've learned that many students don't feel like they're welcome to engage. We oftentimes say hey, the student is not

engaged. They're not trying. They don't care. But when it comes down to it and you ask the student if they actually feel welcome to do so typically we find that they didn't feel that.

And so what we recognize is there's a need to better train faculty on how to communicate the students that they are welcome to do so.

Conveying high expectations, confronting stereotypes and students might have I mean that educators have about students and addressing unconscious bias or other areas that are critical for success.

In addition we think that there are direct instructional strategies that must be implemented. And many of these are just the other side of that professional development.

What needs to take place is collaborative learning. What needs to take place is culturally relevant science instruction.

But we see that there's other things that have emerged from the research that are important. Providing online notes in advance to students so that they can begin to review that material, doing a better job of scaffolding.

Oftentimes when we interview students who are in STEM we find that their class was based upon - their grade in that class was based upon two tests or three tests that took place throughout the entire time but there were no other ways for them to gain feedback about whether they were progressing well enough in the material.

So one of the recommendations that we've seen in the literature is periodic quizzes to help scaffold that information so that when they approach those major exams they're better and more ready for them.

Intrusive instructional practices just like the flip side of advising where we said we have to have truths of advising we needed truths of instruction.

So for example if we know that it's important for a student to participate in tutoring right let's be intrusive and make it mandatory.

If we know that a student is falling behind in the class let's be intrusive and creating engagements and interactions with them that can help build their confidence for them to be able to perform better in the classroom.

Validating practices is another key component. And that really comes with the messages that faculty communicates to student.

You can do it. You belong here. You can succeed. I believe in you, keep your heads in the books. Those messages we have seen are again are critical to success. And again we have found for black men in STEM of these strongest predictors of their achievement.

In addition we think it's important to convey high expectations as soon as and to engage in performance monitoring.

So what oftentimes we'll have a student who will be attending a class and they might even be doing well for a certain period of time in that class but then that student may just disappear or may fall off.

Oftentimes if we have systems in place where we're watching and looking at student's engagement, looking at their attendance patterns, looking at whether they're showing up to class later, leaving class early we can - we come to recognize when it might be - when might be those critical exit points for students and then engage with them through those intrusive practices to prevent their attrition.

We also think that it's important to consider structural recommendations. And these are the last set of recommendations we have.

Here are some that we've learn from the work that we've done as well as from the colleagues that we have who are doing work in this area.

One, we can't allow students to avoid taking developmental education early on. When we find that students wait to - that had classes until their second semester or second year of college they've already begun too far behind. They have to begin engaging in that critical coursework early on.

We need to leverage research opportunities with faculty members so that students can be able to have opportunities to work on campus primarily through work-study.

We know again that a lot of these students being low income not all but many there's an opportunity to be able to link what they're learning in the classroom with their jobs.

We also believe that there needs to be better jobs - we need to do a better job in creating stackable credentials and fluid articulation pathways between two and four year institutions.

And then the last two recommendations that we have above and beyond the faculty diversity and early in which we've already mentioned is that it really - we really need to have faculty members who are engaging with students who have the time to do so.

Oftentimes when we go to community colleges one of the things we see particularly in math remediation is that a faculty member who is most likely be in math remediation and teaching in that area is a faculty member who is part-time.

And the full-time faculty even if a full-time faculty was hired specifically to teach in that area they move on out of that area as soon as they get tenure.

And so we think it's important for our students to be able to interact with those faculty members who have the most time to dedicate to them.

In some cases that will be a part-time faculty member but in other cases it will be full-time but we need to have a greater representation of full-time faculty in those key gatekeeper courses.

And when we're hiring faculty members we need to think about diversity. And if we don't have a diverse pool we need to at the very least hire faculty members who have a proven record of success and training in teaching historically underrepresented and underserved populations otherwise we know that we're setting students up for failure.

And part of the work that we do outside of M2C3 with our center, the center for organizational responsibility and advancement we provide training in looking at this.

And the key point is if you look on the right-hand side these are the core areas of target intervention that are needed and teaching students of color in general but men of color in particular.

Faculty members need to be trained to recognize racial micro-aggressions, engaging collaborative learning, convey high expectations, express validating messages, establish personal relationships with students, challenge students and have that rigor but support them as well.

Use culturally relevant practices. Engage in empowerment techniques and engage in (intrusivity) and performance monitoring as well.

Here is our contact information which as you can see we have listed our advisory board members on the bottom and our contact information on top.

And we look forward to hearing from you about any questions you may have about the material that was presented.

Khalilah Harris: Thanks so much gentleman. That was amazing. The Twitterverse seems to be lit up by your presentation as well so thanks to everyone who is live tweeting.

At this time (Rena) will you give instructions on how people can ask questions?

Coordinator: Sure. Thank you Ms. Harris. We will now begin the question and answer session. If you would like to ask a question please press Star then 1.

Please un-mute your phone and record your name clearly when prompted. Your name is required to introduce your question.

To withdraw your request press Star then 2.

Khalilah Harris: Okay so while we wait for questions to add to the queue I want to thank our presenters again and make everyone aware that the slides from Dr. Harris and Wood will be available to all participants and actually everyone who registered. So we'll ensure that you have access to the wealth of knowledge that they've been sharing.

(Rena) do we have any questions?

Coordinator: Yes ma'am. We do have a...

Khalilah Harris: Okay.

Coordinator: Yes ma'am we do have a question for - from (Ubana) for (Roma Harris). Mr. Harris your line is open.

(Ubana Hopkins): Hello yes. My name is (Ubana Hopkins) and I am a full-time faculty member at Prince George's Community College in Largo, Maryland. And I'm in mathematics. And I specialize in developmental math. Thank you for your presentation.

I have one simple question is that we will - I was not able to get online. I'm just doing the telephone call in because for some reason my computer was not allowing me to sign on. Will you be sending those slides out?

Khalilah Harris: Yes we are going to share the slides. Also we will share the transcript of the full Webinar in addition to the slides via our Web site no later than next Monday.

(Ubana Hopkins): Thank you very much. And I'm definitely interested in working with Dr. Harris and Dr. Wood in looking for some more information and some - and I do agree with just anecdotally those recommendations and me being 37 years old I do see the impact that you have when you look like them, talk like them, dress like them for African-American males and how I'm able to use that in the classroom. So thank you very much and I look forward to working with you guys in the future.

Dr. Marvin Carr: Thank you Professor Hopkins, appreciate your comments and for joining us.

Dr. Luke Wood: And we look forward to working with you as well.

(Ubana Hopkins): All right. I am still on - I stay on though for other questions.

Khalilah Harris: Thanks (Rena). Do we have anyone else in the queue? (Rena)?

Coordinator: Yes ma'am I'm here. We do have a question coming from Ms. (Angel), (Angel Moreau). Your line is open.

Khalilah Harris: Thank you.

Coordinator: Ms. (Moreau) your line is open.

Woman: Okay.

Khalilah Harris: (Angel) are you there?

(Angela Moreau): (Angela Moreau)?

Khalilah Harris: No, (Angela), thank you, apologies.

(Angela Moreau): That's okay. My question is for the panel as a whole. I didn't hear anyone mention what a parents' role is in this situation.

I'm a mother of a successful young man. My son is at West Point. And I know that they were certain things I had to do to make sure he got his classes, studied, was focus so he could get into West Point.

So what are the things that parents can do to make sure their kids, you know, are getting the education they need to get and if they want to focus their sons and stick towards STEM what can we do at home?

Dr. Frank Harris: This is Frank Harris Ms. (Moreau). Thank you for your question.

I think there are several things. You know, I - with regard to African-American men we know that there's a lot of messaging that we have to counteract as parents, as educators.

There are a lot of things that they're being fed and told about their capacities to learn, to be successful and to be successful in the types of courses that lead to STEM degrees and STEM careers.

I think you have to be mindful of that. And then we have to do everything we can to counteract some of those messages as suggested and they - they're not capable and can't be successful any classes and in these fields.

And then I would add and you sort of spoke to this point about having to be intrusive. We talk about being intrusive about when students are in college.

As parents we have to be intrusive as well so we have to make sure that we're doing it because we know or checking on the things we know should be happening in the schools that we're on top of our sons and making sure that they're - that the little things like your homework assignments on time, making sure things are complete and (unintelligible) and that but they're organized and kind of teaching them and helping them build the skills that will be necessary for them to be successful once they're in college.

And I think having a son who's enrolled at West Point congratulations dude, that's an amazing accomplishment. But I would say that you certainly have a good idea of some of things that we know are really hard with our young men.

(Angela Moreau): You know, some of the things that I did people thought it was crazy but we took the cable out of the house while he was in high school.

He could not do the homework upstairs. He had to do his homework downstairs in front of us. I was in touch with his teacher constantly. I did not let him hold a job until his senior year.

But once he brought home his first C - well the teacher alerted me he had a C I called his employer and said he could not come back to work.

So I put a lot of things in place that people thought that, you know, I was too extreme. But I looked at you have to do those things to ensure your son's successfulness, you know, and to keep him on the right path.

And it wasn't easy but when I tell people what you have to do and you have to be in there from the - before they even get to high school or till they complete high school it's a lot of work and effort.

And I don't know because I'm telling my friends who are struggling with their sons right now they're having issues but they didn't put their foot down.

And I think that's a lot of the issue with us as African-American parents.

I don't think we're - we think it's too hard or we don't want to do the hard work or it's too much effort or we're too tired. But I think we have to get past that in order to guarantee our children that they're successful especially our sons.

Dr. Frank Harris: Absolutely Ms. (Moreau). I would add one other thing that you mention high school. I think early when it comes to STEM (unintelligible) is really important. So getting young men involved in programs and (unintelligible), you know, summer type of summer programs that get them exposed to STEM the demystifies the idea of science in STEM, start to have some success and build some momentum and interest in the field and so I think that's (unintelligible).

Khalilah Harris: Hey there's feedback on the line (unintelligible) using a cell phone...

Woman: (Unintelligible) using a speakerphone.

Khalilah Harris: Yes. It's gone.

Woman: Okay.

Coordinator: Okay Ms. Harris are you ready for the next question? Are we done with the last one?

Khalilah Harris: Hold on a second. I just want to flag again Frank and Luke when you guys are speaking there is feedback. And the last piece of your last comment was not audible to the folks on the call. So (Rena) you can go ahead and field the next call.

Coordinator: We can...

Khalilah Harris: ...the next question.

Coordinator: Okay. Thank you Ms. Harris. Our next question is coming from Mr. (Sam), Mr. (Sam Prager). Mr. (Prager) your line is open.

(Sam Prager): Hello Khalilah. Thanks again for putting this together and Dr. Harris and Dr. Wood thank you for your - for the insight.

I just have a quick question about one of the recommendations the one that says don't allow students to avoid taking developmental education.

Am I - I'm not sure if I'm on the line if - am I here?

Dr. Marvin Carr: Yes...

Dr. Luke Wood: Yes loud and clear.

(Sam Prager): Okay cool, cool. Sorry about that. Yes but don't allow students to avoid taking developmental education. I'm the Staff Coordinator of the black male initiative here at Cal State Northridge. And I kind of have a question about how that works.

When I was in - when I got to undergrad, you know, I received my GED. And I was not prepared to take math back in Michigan.

And I was allowed to kind of like delay that right? And so it gave me time to focus on the things that I was good at, you know, and so that I was able to learn how to be a college student right, and handle academic rigor.

And so by the time I got to math, you know, my second year, you know, I had enough, you know, I knew enough other resources if I was visiting professor's office hours and taking advantage of campus resources so that I can, you know, tackle math with some level of confidence.

But how it is set up here for the folks in developmental math in California they make them take it at the door right?

And so they're already coming to us, you know, underprepared in math and English. And then we kind of have our students take the, you know, the developmental classes, you know, at the beginning of their experience. And then when they don't, you know, do well then we stop them out.

And so I'm wondering if you can kind of give some more dig, you know, further into that recommendation about not allowing a student to take developmental classes, you know, and not allowing them to delay it, I'm sorry and give me some more insight about that if you can. Thank you.

Dr. Frank Harris: Yes that's a great question. So the rationale for that recommendation is and particularly in the community college context we don't usually have just one level of developmental education.

You usually have development education across math, reading and writing. And then within each of those you can have up to four or five classes to take in developmental education.

So the student comes into a community college and says that and basically wants to be - wants to major in STEM, wants to pursue let's say biology and they test into developmental math and they test at three levels below right? If they wait until that second year to take it they're never going to be able to get into the sequence that they need to be able to get into in order to for them to pursue a STEM degree. So that's the rationale for.

It's based upon the total number of levels that we oftentimes see in community colleges where again you could have up to four, sometimes five levels of developmental education in just one single area.

(Sam Prager): Got you, thank you so much.

Coordinator: Thank you sir. Our next question is coming from Ms. (Shelby Nancy). Ms. (Nancy) your line is open.

(Shelby Nancy): So how do you get events such as Hack-a-Thons or like STEM related events to come to areas like for instance Detroit or really urban-like areas? Because, you know, we want students from underrepresented areas to attend these majors but sometimes it does take STEM related events that does encounter fun activities staff as well but, you know, but we see them as much. Like I would do research for those type of events but I can never find any.

Khalilah Harris: So (Mark) - Dr. Carr can I get you to take this question?

Dr. Marvin Carr: Yes. You said you're in Detroit?

(Shelby Nancy): Yes - well I'm in California right now but...

Dr. Marvin Carr: Okay.

(Shelby Nancy): ...like yes, so I'm still look for events in the Detroit area but I can never find any.

Dr. Marvin Carr: That's perfect. So one of the things that I think we've noticed is that there is a huge disconnect within our community. There was just a report that Chicago is one of the most diverse cities in the country, the number one most diverse city in the country. But at the same time it's the most segregated city in the country. So that's from (Nick Silvers).

And that is why so often I want to say this in Detroit there is Hack-a-thon a day right, if not Hack-a-thon a week.

There are entire communities and organizations within the city of Detroit that are - that have what we call a (T Key) have this, you know, not (IT) but (T Key) but have this tech, this technology or the STEM IQ but just isn't shared across the board.

So those are - I'm - Detroit is where I'm from originally. There's an entire community driving (unintelligible) technology and startups that are kind of centered in the same areas. But they are kind of blocked and hidden from the larger African-American community of the city.

And so but what I've seen is that interestingly enough organizations like Meetup.com and other organizations like that are definitely bridging the gap.

And so one of the things you can do actually is to go to Meetup.com and see where our the organizations or the meet up groups in my area that are doing, you know, cyber affairs or that are doing maker fares or that are doing Hack-a-thons? And I guarantee you on any given day there are 1000 of Hack-a-thons occurring across the country.

But we have to know where to look. More often than not they're going to be at universities. Detroit is quite a unique situation because, you know, it's coming back from a very, very desperate situation. But there is a strong, strong STEM community within the city.

We can share more information about that directly with you but the DPS from what I understand has a huge STEM outreach and STEM exposure aspect to its programming.

But I think that speaks to the larger issue across America of exposing young people to STEM that in so many places including Baltimore all of the STEM, all the technology, all the (T Key) was separated from the young boys of color. So how do we bridge that gap? It's simply by reaching out a hand from both sides I think.

Khalilah Harris: Thank you. (Rena) do we have any other questions in the queue?

Coordinator: Yes ma'am. We do have some questions on the queue. The next question is coming from Mr. (Robert), (Robert Jade). Mr. (Jade) your line is open.

(Robert Job): Good afternoon. Am I able to be heard?

Coordinator: Yes sir.

(Robert Job): Okay good. Good afternoon. My name is (Robert Job). I am an engineer professionally in Nashville, Tennessee as well as the pleasure of serving in the Air Force International Guard as a Civil Engineer.

So I've had the blessed opportunity to be able to see engineering and its diversity and its application not only in the private field but also federal and government level.

I had two questions if I could quickly go over some things. First for Dr. Carr, you in - from your level at the - with science and technology policy what success have you seen in regards of funding sources through My Brother's Keeper in being able to capture African-American males, Latino males at the secondary school level as far as introducing STEM to them as a career field and then also providing the resources and funding support to carry them from secondary education into community college or four year institutions?

I had the personal experience of being exposed to STEM through the College of Engineering and Technology at Tennessee State University as early as fourth grade.

And through that tracking and through that funding that came from the National Science Foundation and other areas we - I was able to see my education grow in that area.

With the recent budget cuts in the last ten years we haven't been able to pour that same type of funding resources into our schools in the Nashville community with Fisk University and Tennessee State University. So I was wondering what funding have you been able to see successfully applied?

Dr. Marvin Carr: One in particular that I can point out -- and actually I think Khalilah may be better answer this question than me -- is from the Department of Education sometimes the Department of Education does kind of experimental things with financial aid.

And last year they offered an experimental financial aid opportunity called near peer funding where universities could use near peer funding to kind of offset their own costs for their students who had - who took work-study right?

And using their work-study hours they had to go into the community and do training and mentoring and tutoring instead.

I - so that's a great thing that I think could really help support specifically African-American communities but I think like what you said earlier the larger issue is that the money oftentimes isn't there from the federal level.

People often think that the President and that the White House and Congress could do making things to help education that's because oftentimes they don't understand the fact that less than 1% of our federal budget goes to education right?

The federal government really has zero impact or sway over what local and public education can and cannot do.

The only thing we can really do with block grant is federal financial aid. But that's a state level decision-maker. And often times block grants that go out are divvied by the states.

And so I think that's one of the major ways that we can continue to do work from the federal level is by continue these - continuing with the federal financial aid experiments that have been happening.

But so I can't speak to the past. I can speak to the future on (Be) My Brother's Keeper.

You said you were exposed in the fourth grade or at 4 years old. Well see My Brother's Keeper STEM the new STEM Plus initiative within My Brother's Keeper that's exactly what we're looking at was that exposure.

And so the last week in February so February 28th through March 4 was going to be the My Brother's Keeper Day at the National Labs.

So My Brother's Keeper Students, all students but especially young boys of color from all around the country are going to be invited into one of over 100 national laboratories and federally funded research and development centers to be simply exposed to what STEM has to offer.

So actually this is one of the things through My Brother's Keeper that's going to be coming down the pipeline.

(Robert Job): Is that Dr. Carr excuse me interrupt. Is that information for that February 20 date as well as the listing of those national laboratories already available for public view?

Dr. Marvin Carr: So it's not available for public review yet but I believe that for the first of the year after the first of the year it will be.

So these are - so the way My Brother's Keeper works is that it is an initiative that is ran from the mayor's office. So the mayor's office have all the information. And so their particular, you know, school or organization involved in My Brother's Keeper Initiative will get that information.

But that information will be made public after the first of the year.

(Robert Job): Great, great thank you so much.

Khalilah Harris: If I can step in here I know you said you had two questions but I want to leave room...

(Robert Job): Yes man.

Khalilah Harris: ...for one additional person to ask a question since we are now over time and also want to emphasize what Dr. Carr just said around the role of federal government.

Oftentimes there's tension between grassroots and grass tops work because people don't really understand the role of the Department of Education or the Executive Office, the President's Office in what happens at the local level.

And dollars to come from federal government to states but oftentimes it is the state and local government who determines how funds are going to be resource to communities.

So along that same thread with My Brother's Keeper while it is a federal initiative enacted by the President at a local level.

Is critical that people understand that they should be connecting with their mayors and county executives about how they can access supports and networking and resources through the My Brother's Keeper community challenge that they're involved in.

With that said (Rena) will you take one more question and then we will close?

Coordinator: Okay.

Yes ma'am. Our last question is coming from (Corey Halliday). Sir your line is open.

Mr. (Halliday)?

Khalilah Harris: Okay will you move on to the next person?

Coordinator: Okay ma'am. We have a question coming from Ms. (Mindy Silver). Ms. (Silver)?

(Mindy Fuller): Hi. My name is (Mindy Fuller) and I am a co-producer of a documentary called Choice Not Chance that explores the choices of African-American males under the age of 30.

When you are speaking about how important faculty members are to the success of educating African-American males.

But how do colleges go about finding faculty that look like our sons and not only that look like our sons but have successfully taught African-American males?

Dr. Luke Wood: Well part of the - this is Luke. Part of the response to that is really we have to one build a pipeline to do so.

But two we have to recognize that while we don't have the same type of production that we would like to see of black men in the STEM fields at, you know, the master's and doctoral level the ones that are being produced are not being hired.

So there is - there are numbers of those individuals that could readily serve as faculty members but oftentimes because of the way that the process of hiring a faculty member occurs they never get selected.

And here's a couple of ways that happens. One you have to look at where the actual announcement goes.

If when typically when a faculty position is announced it goes on the college's Web site. It's part of a district. It's goes on the district Web site and they may advertise it in a majority, you know, science or majority higher ed faculty online newsletter or newspaper.

But there's outlets that are specifically reviewed and read by faculty members who - or prospective faculty members of color that are typically not advertised to.

So really the pools that they get aren't diverse because they haven't tried to make them diverse. And even when they do get diverse pools we have to look at what we call social closure theory.

People hire people. People bring in people to be on their teams. People associate with people who are most like them because it makes them feel the most comfortable.

So even when you get a person who's faculty to the final - to a final stage or to an interview stage when they interview that person and when they interact with that person just in person they oftentimes feel less comfortable with them because they have different experiences.

And what we like to do is say that diversity is where you find the strength and where you can really create an environment that is most supportive of the students that we need to serve.

It is oftentimes that never takes place because one the pools aren't diverse because they - of how they're advertised and also then when we do have faculty color in those pools they're not selected because they - people go with people who they feel most close and comfortable with.

(Mindy Fuller): Thank you.

Khalilah Harris: Thanks so much. So I want to again thank Drs. Marvin Carr, Frank Harris, and Luke Wood for joining us for this installment of our monthly Webinar series.

We hope that everyone participating in this call was able to get something useful for themselves and to share throughout the broader community.

Also encourage folks who follow the hashtag csdweek for Computer Science Education Week to think through ways that we can expose as many of our students to STEM fields especially computing science which is more than just spending an hour on code.

Thank you everybody and again we will share the slides and the transcript from this call within the week. Good night.

Dr. Marvin Carr: Thank you.

Coordinator: And that concludes today's conference. Thank you all for joining. You may now disconnect.

Woman: Thank you.

Khalilah Harris: Thank you (Rena).

END