Clark College- Disability Supp. | Penguin Pathways - Biology with Travis Kibota

Happy spring, penguin nation. Welcome to the Penguin Pathways Podcast. Excited to have Travis [? Kubota ?] in the building today. Rihanna Johnson, director of Guided Pathways and Partnerships, and we will get started soon.

[MUSIC PLAYING]

All right. Welcome to the studio, Travis. How are you?

Thanks, I'm doing well.

Wonderful. Great to have you here today. So Travis is coming to us from the biology department and many things over the years, I'm sure. And he can tell us a little bit about that. So a lot of Guided Pathways Projects happening in the STEM area. So let's get into it. Can you tell us a little bit about your unit in the college and how it impacts student experiences?

Yeah. So I'm in the biology department, part of STEM, science and math serves every degree seeking student, at least in some way. In particular in biology, we serve the health care programs, nursing, dental hygiene, and we have quite a few students interested in going into science, biology mainly, and engineering and transfer to other universities.

Wonderful. And we know that STEM is a high demand sort of field and sort of the flavor of the month, as far as career pathways are concerned?

Yeah. So there's a lot of demand for engineers in our local community, a lot of demand for people with science backgrounds, all over the place and in a growing way.

Yes. And you mentioned health care career pathways and definitely plays into that. So you're an interesting guest because you're coming to speak about biology, but you have a little experience. So why don't you tell us about that with Guided Pathways?

So in 2018, 2019, I was the lead for the college, or one of the leads, I guess, in our Guided Pathways efforts for a little while. I've been here a long time since 1994 at the college, and when we first started talking about Guided Pathways, even before I became directly involved, I was interested and supportive of it because I saw that with Guided Pathways, we could work together to try to make improvements for students as opposed to working individually within our separate classes and thinking that collection of separates would be effective or be the most effective way to serve students.

Absolutely. Yeah, that's really one of the beauties of the Guided Pathways model, is that it really brings together the different areas. And anyone who's been listening to the podcast knows that we've had guests from all across the campus doing different things. But science and math, the STEM area, can sometimes be a real barrier for students. So what are some of the challenges that students have in their science courses?

I mean, the first is belief in themselves. So many people come into college not thinking that they're math people or science people. And one of the jobs that we have is to convince them that they be. They can do math. They can do science. And both math and the sciences are like foreign languages, but they're not like foreign languages that have direct translations into words, they're translated into concepts that can be difficult to understand. So getting students to have confidence in themselves, feel like they belong, is something that's just a fundamental task that we in STEM have in trying to help students be successful.

And then in the sciences and in math, the learning is developmental. You have to know the basics before you can move on to higher level learning. And so many of the science courses, many of the math courses are sequenced, which means that it takes-- it's a long road for students to make it through the basics of math and science to get to higher level courses.

Yeah, absolutely. So let's talk a little bit about your Guided Pathways projects this year. Our fabulous support person and producer, I'm calling Joey the producer of our show, he was just talking about how he'd love to have an opportunity for his 4-year-old to have some STEM exposure. So what are some of the things that we're doing? Maybe not with 4-year-olds, but others?

Maybe beginning with 4-year-olds, so starting from older students and working backwards, some of the things we're doing are developing peer mentoring in partnership with WSU Vancouver. We have some students from WSU Vancouver in the sciences serving as mentors for our science students here. And when science and engineering and when those students our students transfer to WSU Vancouver, we hope that they'll serve as mentors for new incoming students. So that'll give our students some connection to places that they might transfer to and some familiarity and comfort.

In the same way, we're developing some coordinated undergraduate research opportunities with WSU Vancouver. Again, just by itself, undergraduate research is something that helps students get confidence in their ability to do science and some sense of belonging in the sciences. But then in addition to that, by coordinating with WSU Vancouver, we'll have opportunity for students to meet other students, researchers, meet some of the professors at their transfer institution before they transfer. And again, that's meant to-- we hope that will help give them a sense of place and belonging and comfort as they transfer to their next schools.

We're trying to streamline the path and make the course requirements for our transfer programs more attainable in a more reasonable amount of time. So we're looking at things like the course sequencing and how we can cut down on the preparation for college level math and college level sciences. The math department has been working on that for several years now and they're making good headway on that, and we're just starting to look at that kind of preparation for beginning our chemistry sequence and our biology sequences.

And then you mentioned 4-year-olds and introducing them to STEM. We are just starting in on a family engagement program where we will engage the family members of first high school students and then working backwards once we're successful with that to middle school and elementary school, helping the kids in our community and their families understand the value of science, understand the value of them participating in science and contributing in that way, and helping them to understand how they can be successful in keeping those opportunities to be members of the scientific community, keeping those opportunities open to their kids for as long as possible. Not that everybody's going to become a scientist, but at least having the opportunity to go in that direction if they want.

Yeah, absolutely. I love that idea. And one of the things we talk about a lot in terms of Guided Pathways is addressing equity gaps. And I know that in STEM areas, those equity gaps definitely persist, and we see disparities around who goes towards STEM fields and who's successful in STEM fields. So do you want to talk a little bit about some efforts that you have towards that?

Yeah, well, all of those things that I just mentioned have shown evidence at other institutions to close equity gaps. The equity gaps are real and present and important. At the same time, in math and science, the overall success rate of students in earning not just associate degrees but bachelor's degrees beyond that for all of our students is pretty low at this point. And so while all of the projects we're working on are intended to close equity gaps in some way, they're also intended to just lift everybody up and improve success across the board.

Yeah, fantastic. I was talking to our engineering faculty Tina Barsotti, we talked about having like STEM pop up events with a STEM mobile. Wouldn't that be fun?

That would be very fun. Yeah.

Well, it sounds like you are really trying to address some of the challenges that people have as far as pursuing STEM career fields. We know there are a lot of opportunities there and we really appreciate you for coming into the studio today to share with us some of the initiatives happening in STEM.

Yeah, well thanks for having me.

Wonderful.