Chemistry for Biologists

Transcript

00:00:00:00 - 00:00:06:26
Ananya: Chemistry for Biologists Project authors interview.
Introduction.

00:00:06:26 - 00:00:41:27
Natasha: My name is Natasha Ramroop Singh. I am an assistant teaching professor here at TRU with the biological sciences department. So I've been here at TRU for almost five years now.
I teach a lot of different courses, but this specific project that I've done with the TRU open press is geared towards our, first year biology students. So it's about supporting them, through their journey, and ensuring that they have the tools and the skills necessary to navigate the first year of biology successfully.

00:00:41:27 - 00:00:47:02
Ananya: What advantages will students gain from this project?

00:00:47:02 - 00:01:50:24
Natasha: This project is looking at enriching the chemistry content and the chemistry background of our students. Many of them come straight out of high school and they have done chemistry before, but, you know, sometimes they forget, sometimes they just need a little bit of reminders. So because chemistry is not necessarily built into our curriculum in first year biology, I found that there was a bit of a void in terms of having them understand these basic concepts that feed into the larger concepts that we're teaching within the curriculum itself. So instead of having to spend time, you know, going through these things during the course itself, I thought that it would be a good idea to create these videos, so that, you know the students can have access to them at any time - they're bite size pieces. So it's easy to digest, you know, they can look at them and, and really get the succinct information, easily and then apply it, of course, to the work that they're doing in biology.

00:01:50:24 - 00:01:57:13
Ananya: How thoroughly does the project address fairness, inclusion and accessibility?

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Natasha: That's interesting because, you know, typically when we teach, you know, students are they're sitting listening to us. And it's a very typical set up. We have the board, the classroom, you know, with, with a media like, video, it's going to be, a format that is available to students any day, any time.

We have captions, very accurate captions on them as well. So, you know, students who, like to read versus listen, you know, there's a visual of light board with the colors. They can see my face as well as what's being written. It's very much like an in-class experience, but on the go. Right, so they don't have to necessarily be at TRU, they can be at home anywhere, and they can have the experience of being in a class, yet not. Right, so I think it's very accessible in that way. Of course, the closed captions help a lot too,

00:02:53:24 - 00:03:00:25
Ananya: In what ways do students acquire skills, insights, and understanding through the project?

00:03:00:25 - 00:04:20:13
Natasha: Chemistry is a science that can be applied to many other sciences, physics, medicine, you know, but specifically to biology, there are certain systems that we are focused on. And then there are certain examples that we're also focused on that are biology specific. So how students benefit is that
when they look at these videos, they're not just getting basic chemistry education, but they're getting chemistry education that's geared towards biologists. You know, we talk about molecules that they're going to meet, when they're studying, for example, respiration and photosynthesis.
So we talk about a lot about the importance of water to living things and the chemical properties of water that support life. So we're not just using random generic examples, in these videos, but rather they are geared towards biology specific systems. So I think that allows students to really make the connection between biology and chemistry, which is what they're missing when they come, because they think that chemistry and biology are two separate entities. Right? So they happy to forget all the chemistry that they've learned in high school. And then when they come and start biology, then they go, oh, okay, we do need all of these things. And then giving them the specific examples, showing them the links, allows them to understand and appreciate that connection.

00:04:20:13 - 00:04:27:16
Ananya: How sustainable is the project regarding funding, upkeep and continuous improvement?

00:04:27:16 - 00:05:18:02
Natasha: Right, so I mean the TRU press is an amazing initiative. And it's going into its second year now, almost the second year of its existence. I think in terms of the sustainability of this projects and many others, it's really going to depend on TRU to continue to support these kinds of, platforms and these kinds of initiatives.
Right.
For me personally, I'm happy to help update and upgrade things as time permits and as the need arises and I mean, that's, that's the beauty of, of open. Right. It's not printed. It's not set in stone. We can adjust a website how we wish, we can change things, add in things, take out things. So I think the model itself of open is quite sustainable. So I'm happy to continue to be involved.

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Ananya: What might a future project scope entail?

00:05:22:10 - 00:06:17:29
Natasha: Future projects scope - well, just coming off the high of finishing this one. I can see us building on what we've already done but not just for this course, but for other courses. So, for example, advanced biochemistry courses, we have a lot of chemistry students that do

advanced biology. So what they're missing is the biology side of things. So I can see where we can do a series of videos that cover basic things like physiology and anatomy.
You know, just the general jargon and terminology that a biology student would know, but a chemistry student might not. So it's really limited by your imagination and how creative you want to be in the classroom, and how invested you are in helping your students succeed. But there are a myriad of different ways that that we can continue these kinds of projects and these videos especially.

00:06:17:29 - 00:06:22:01
Ananya: Thank you for the interview, Natasha.

00:06:22:01 - 00:06:23:07
Natasha: Thank you for having me.