

Transcript *Fireside Charla* 008: SDSU Georgia

Audra: Welcome to *Fireside Charla* with Dr. Adela de la Torre, President of SDSU where we prepare the global citizens, compassionate leaders, and ethical innovators who will solve the world's greatest challenges. I'm Audra Stafford, proud SDSU alum. Today's Charla is a great opportunity to learn about SDSU Georgia, and how our students and faculty are making an impact across the globe. It was tapped in the country of Georgia, where SDSU awarded 52 degrees to our first cohort of STEM leaders, 40% of which are women. *Fireside Charla* starts now!

Adela: Good afternoon. We're here in the Republic of Georgia celebrating SDSU's first graduation of the SDSU Georgia program. Today we have our Dean of the SDSU Georgia program, Dean Halil Güven, as well as one of our graduating seniors Tamar Basiashvili.

I was really curious, why did San Diego State make a decision to develop this compact in the country of Georgia?

Halil: Well, San Diego was one of 50 or so U.S. universities that competed for this project in Georgia. So the compact was requested by the Georgian government to reform higher education and a minimum Challenge Corporation, the independent agency of U.S. government that is funding the compact had an open bidding for the compact and San Diego State University won this bid to establish San Diego State University Georgia campus. Georgia is one of the former Soviet republics, a very progressive one actually, it was the most southern state in Soviet Union, it was the like Riviera or the tropical climate, it was the most popular state to come. So Georgia enjoyed a huge group of scientists working on a variety of topics in physics, chemistry, etc. during the Soviet era. So there are a lot of very good scientists came out of Georgia. Tbilisi State University was ranked number four during the Soviet era. So big history on higher education in Georgia.

Beautiful country, small country, 3.7 million population. It is between Russia, Turkey, Armenia, Azerbaijan, these are the neighboring countries. And the big support from the American government to help Georgia build STEM economy. Right now, Georgian economy is not very strong, it could be stronger. But right now, income per capita is about \$4,000 per person annual. Economy is small but building a STEM economy, it will make Georgia prosperous, richer, so it is in the interest of U.S. government to support Georgia to build a strong economy so they can continue being the democratic country in

the region and continue growing with democratic principles. And it's a wonderful place to be and it has a lot of potential to do that.

Adela: So what does San Diego State University bring to this compact that's so very special? And what has it done to really make an impact in changing higher education, particularly in the area of STEM for the country of Georgia?

Halil: Well, one of the big objectives of the compact, and I guess the biggest, is to establish international accredited programs. So most of the programs in Georgia now are left from Soviet era. They have undergone some reform and some modernization but there is no international accredited STEM programs in Georgia. Students studying STEM degrees in Georgia, they have difficulty in working on multinational projects. Projects funded by World Bank or funded by multinational companies have difficulty getting engineers to work on their projects because the Request for Proposal (RFPs) for these projects funded by World Bank require international accredited degrees. So they require that engineers working on bridge projects or just working on road projects, are engineers who have international diplomas. So so far, the engineers have been coming in from countries, neighboring countries, and from Germany and other countries working on these projects, and Georgian students graduating from Georgian STEM programs cannot be employed. So this particular program will enable graduates from San Diego State University Georgia programs to start working on those multinational projects, which they couldn't before.

Adela: That's wonderful. So Tamar, you are actually graduating today. So it'd be great to tell me about your journey. Why did you make the decision to enter the first cohort of San Diego State University Georgia STEM students? And what has it brought to you in terms of your own aspirations for success?

Tamar: Yeah, absolutely. Um, so when I first decided- I was always from childhood interested in the STEM fields, and also in the sciences, I was always fascinated with chemistry, biology and biochemistry altogether. However, I didn't think that Georgian educational system, higher education, would allow me to succeed as a professional and accomplish my goals and aspirations if I enrolled in some of the Georgian universities. However, as soon as I heard about SDSU's program coming here in Georgia, I decided to join in. And I decided to continue following my passion to science at this university, joining the first cohort of students who are graduating today.

Adela: So after you graduate from SDSU, what will you be doing?

Tamar: So after I graduate, I plan on attending graduate school in the United States. And I'm really excited to continue doing my research and in the primary field of my interests, hopefully advance in the field, and with my research experience, and my research capacity, try to come back and invest back in Georgia my knowledge so that I can further advance the field of science and research in my country.

Adela: Another really exciting element of this particular project is that 40% of our students are women. How has that impacted you to have such a large cohort of women colleagues in STEM? And do you think that experience has made you a different person today?

Tamar: Yes, absolutely. I think that having women around me, having women mentors around me and having colleagues, my classmates, pushing forward the STEM field for women has really encouraged me and inspired me to further work harder and work more on the educational side and on spreading awareness in the Georgian community so that we can empower other women as well to get involved in STEM fields. And I think that having this opportunity to have 40% of the classroom filled with women around me, has really given me more inspiration and motivation to carry on doing what I do, and to further follow my passion.

Adela: So one of the exciting things about this program has really been the fact that SDSU is deeply committed to workforce development, and creating the kind of workforce that will transform the Georgian economy. So Halil, how can we impact the Georgian economy by bringing all these young, brilliant students like Tamar into our educational system and create the future workforce? So what is the strategy when we think about this important program to enhance educational diplomacy here in Georgia?

Halil: Well, in the case of Tamar, in the biochemistry field we need advanced degrees. So one idea is that once our students could graduate from chemistry, biochemistry, enter graduate programs in the States, some of them coming to San Diego State University, then they do their doctorate program there, and they could do joint research with their home universities, Tbilisi State University, which has the same equipment that we have on the main campus and the Mars and all the other spectrometry governments. So there'll be joint research to advance the biotechnology industry in Georgia. There's already some biotechnology research going on, including Walter Reed, Army Research Institute do a lot of advanced research here, and some our students have done internship there. But the idea is to build biotechnology in Georgia in collaboration with U.S. universities, where these students will be the bridge. San Diego is the capital of biotechnology in the United States. There's a lot of possibilities in that and San Diego

State has a high-ranking reputation in this. So we're hoping that that will be transformed here as well besides education.

In the case of engineering students, a big need in Georgia is construction and civil engineering. A lot of infrastructure projects, a lot of roads to be built in different parts of Georgia. So having students trained to the advanced techniques in civil engineering, construction engineering, which is again very big in San Diego, is very important for Georgian economy, to build Georgian economy, because construction sector really holds a big promise in Georgia. Right now, we have only sophomores in civil engineering, but we have industry knocking on the door wanting to hire them even before they finished their second year. In computer engineering and computer science there is Georgian Innovation Technology Agency (GITA) and they are hiring some of our students right now. So there is a big push for startups. There is a lot of funding provided by Georgian government for innovation economy, for applications startups. So we are collaborating very closely with GITA in making sure that our students can move on to establish startups and employ people.

Hence the initial reactions from industry to our graduates, as well as the sparks we see here and there is very encouraging, both in biotechnology industry as well as in GITA and of course the construction sector. So there's indications that the wheel started turning and there is industry waiting to hire these students. And once the wheel turns, once we have these students in industries, I'm sure it will accelerate.

Adela: So Tamar, you're clearly a trailblazer as a young woman going into STEM, even the United States we need more young women like you entering STEM, tell me in your decision to go into STEM, how did you get your parents excited, first of all for you to pursue STEM, but also to go into a brand new program, the SDSU Georgia program, being now a member of the first graduating class? So could you give us a little background on how this pathway occurred and your family and how they viewed your decision to go into this program?

Tamar: Sure. Firstly, my family and I were really both excited and really afraid, because we knew that there was this really great program starting out, but we didn't really know what it could really offer because there was no precedent of either the graduated class or, like, classes conducted. So my parents firstly, and even in my school, they didn't really see me going into the STEM fields as a very good starting point for professional young woman. It was not viewed in the community around me that a woman could succeed or even anyone could succeed in the fields of engineering and science in Georgia. So I think that my decision to go into this chemistry/biochemistry program and

follow the interests of mine and try to develop something and try to build something based on the capacity and the opportunities that SDSU offered, really tempted me and my family finally to be confident going into my undergraduate degree when entering SDSU Georgia's program.

Adela: What are some of the ways that SDSU Georgia has been helping students to really move from their communities, and maybe backgrounds that would not have promoted STEM in their areas? What have been the areas in which you've developed the programs to support these young students?

Halil: Well actually San Diego State University Georgia has been doing a lot of groundbreaking in terms of helping students. So we have the Associate Students Georgia, we have elected leaders of the student group here that connected with the Associate Students on the main campus, a women-supporting student clubs in Tamar's tech's field, it's the American Chemical Society, we have American Chemical Society student chapter in Georgia for now almost four years, several students traveled to winter alum meetings. But we also support a lot of students to go to competitions overseas, they had opportunity to participate in hackathons not just in Eastern Europe, but they have been also to MIT. First group of students have been really special and we supported them, I guess even all the way to taking GREs and applying to schools in the United States.

And Tamar has been admitted not just to Dartmouth, but also to Rutgers, to Case Western University, and then we have another student in the computer engineer who's admitted to Carnegie Mellon, which is the top in computer science where he wants to do artificial intelligence in Maryland. And what I've been told is that our students tell us that now that we're out there in the field, applying for programs, we realize that our degree is even more valuable than undergraduate degrees, more valuable than some of the schools we applied. And we feel that we are fully equipped. So we have really been lucky to have the first group of students we have and really enjoyed getting to know them. It's been really a very exciting four years with with them. And I think we expect a lot from this first group of students, and we hope that we continue being in touch after they graduate. Some of the things that we have been doing with our group of students, now we're trying to share with our partner universities, where they retreat with our students and the student government from Tbilisi State University.

And actually, this has been exactly the topic: what are we providing to our students and how can our partner universities copy of those or duplicate those for their students, so that they can end up being in tech and other students we have? Of course, besides

SDSU Georgia's support and coordination here, our curriculum, of course, is the key. Our students have general education, which Georgian universities don't have general education component. After the first two years, they said it really starts standing out, making speeches, all communications applying, we have a Career Development Center, they have been learning how to do interviews, we are providing coaching support for them. It's been a multidimensional support. And we have been very happy to provide the support because we have seen the reaction and we have seen students using this support very intelligently.

Adela: Tamar, I've heard you've done some exceptional things while you've been in the SDSU Georgia program, could you share with me some of the things that you feel have been really important in challenging your ideas, but also in creating opportunities for other students here in Georgia?

Tamar: So SDSU Georgia really empowered me to do many different things. And first year it was Empower Women's Club, were there first we had the idea to create a STEM cookbook for young schoolchildren, so that we could spread STEM awareness with the high school kids and the teenagers. So me and my classmate created this cookbook, where we explain STEM fields and exciting experiments and recipes through scientific concepts. And this way, we're trying to reach out to younger kids who might not think that science is very exciting and interesting and try to reach out to them and show them that actually science is really around us and that you can get involved in science all day long.

And in addition to this, except for non-academic affiliations, and non-academic opportunities, SDSU also gave me an opportunity to do research and to participate in international programs. For example, I've conducted research at Ludwig-Maximilians University in Munich, as an adjunct scholar. And I've also, just now, I've chaired the American Chemical Society Georgia Student Chapter international symposium, along with the Weinstein and with the chair of the symposium, Dr. William Tank. So it's been a really exceptional opportunity to be involved in this program, as it gave me an opportunity to inspire others, as well as empower my own self to go through with my passions and to try and evolve as a future scientist and leader.

Adela: So Tamar, if we were to look at you 10 years from now, where do you think you'll be and what do you think you'll be doing?

Tamar: As of now, I'm really passionate about science, specifically of the field of biophysics, biochemistry, and structural biology. So I do plan on finishing my PhD in five

or six years. And then hopefully, I want to teach in academia, I want to stay in academia, continue doing my research and continue educating others and inspiring others, women as well as men to join the field of science and join the excitement of scientific exploration. And I hope that in 10 years, I'm going to be on my way to getting into academic positions. So starting my professorship or getting a tenure. And I do really hope that with my work as a future scientist, as a future researcher and educator, I'll be able to contribute not only to the community of Georgia, but also to the worldwide science.

Adela: Now, Halil, are there any other observations you have of Tamar? Because it's clear she's one of our exceptional graduates and a wonderful role model. What are some of your observations of how she's impacted SDSU in such a positive way?

Halil: We're very proud of Tamar's accomplishments. And she's always with a smiling face and you wouldn't know she's doing all these things because she never talks about them. She's very modest. But she is really a powerhouse of both Empowered Women Club as well as getting us the American Chemical Society certification for Tbilisi State University, which requires activity on the ACS student chapter. And having an international symposium put together is not a piece of cake, it's a very difficult task. And Tamar does it with a smile and without any strain. So we were very lucky to have Tamar. And we wish her the best, and one last thing about Tamar is that she is very careful and very systematic thinker and clean thinker. So when she got old offers from different universities, she did a lot of interviews, including me. She interviewed a lot of people, asked about different universities, she researched it totally. So she's a very careful, systematic person and I expect a lot of big successes from Tamar. And her research, she didn't talk about her research, but her research now, what she did at San Diego State University can be a research topic for doctoral work.

Tamar: Yeah, absolutely.

Halil: Do you want to say a few things about your protein research?

Tamar: So my protein research actually took place in Germany. However, we did similar work here using electro freezes and NMR Nuclear Magnetic spectroscopy and molecular modeling tools to try and understand the anti selectivity patterns and the compounds. So we try to investigate how bioactive compounds act differently in different environments and how they can impact our health when they're in our organism and how can we influence their sterile symmetric characteristics once they get

into our bodies. So I think that the research that we're doing here in Tbilisi State University is also very important, and it has huge future development opportunities.

Adela: So it's clear to me that you're going to have a wide range of opportunities in your graduate program, which started with your introduction here at San Diego State University Georgia, and all the relationships that you developed with faculty and students here. So I want to congratulate you today, graduating and moving on to a wonderful future as a STEM professor, an educator, and researcher that will represent this wonderful country of Georgia as well as the world. Thank you.

Tamar: Thank you. It is really flattering to hear this from you.

Audra: Thank you for being a part of *Fireside Charla*. Next month, we bring you a conversation focused on shared governance at SDSU, a concept that describes and helps us guide our commitment to include all in the decision making processes, and why this core value is critical to our success. In addition, get ready to hear from SDSU's brilliant students and faculty researchers who are innovating and unveiling critical discoveries every day. Remember that you can access transcripts and join the conversation at sdsu.edu/firesidecharla. This is Audra Stafford, proud alum, hoping that you are inspired to have some interesting charlas of your own.

Narrator: *Fireside Charla* is recorded at KPBS studios. Our Senior Producer and Managing Editor is Maria Keckler, our Operations Manager is Lisa Morrisette, original music and editing is by SDSU student Kevin Krick. And for their help and creative input we give special thanks to: Tom Karlo, John Decker, Perette Godwin, Brittany Santos-Derieg, Luis Murillo, La Monica Everett-Haynes, Joyce Gattas, Michele LaGrandeur, Kelly Woodhouse, Jeff Ernst, Scott Hargrove, Sean Hawes, Ethan Garcia, Dan Montoya, Travis McCauley, Luke Wood, Coleen Geraghty, James Tarbox, James Frazee, Cory Marshall, Kao Saechao, Rudy Arias, Uriel Avila Zuniga, Katie May, Angela Odis Brawner, Seth Mallios, and to you for listening and sharing this podcast with others. Join the conversation at sdsu.edu/firesidecharla and be sure to connect with President de la Torre on [Twitter](#), [LinkedIn](#), and [Instagram](#).