

Year 9 Testimonials

Year 9 had us pursuing our third renewal of central campus funding for the CSSI support team at CREATE. So, we asked campus and community partners if they might like to speak to their own experiences with our team. **Here is what they said!**

Campus partners (a sample)

CREATE is a tremendous resource to the university community (faculty, students and staff), as well as the greater San Diego community. As a faculty member, CREATE has been instrumental in supporting my research program, particularly supporting the development of my extramural grants, with CREATE staff serving as external evaluators for my Gates Foundation and National Science Foundation proposals, and helping me to draft strong prose on evaluation that went straight into my bids for funding. These efforts have led to being awarded 3.5 million dollars in extramural grants. In addition, CREATE has been instrumental in supporting the development of relationships with school districts, helping to match-make researchers and communities so that research can be responsive to community stakeholders, and potentially have the greatest (sustainable!) impact for educational equity. - **Sherice Clarke, Assistant Professor, Department of Education Studies, UC San Diego**

CREATE plays a very important and valuable campus role in strengthening extramural funding proposals, making them more competitive for funding from major sponsors, particularly those, like NSF, that require or encourage activities to broaden the participation of members of groups historically excluded from STEM fields. Research Development (RD) frequently encourages faculty who are preparing proposals to explore and include in their proposals collaboration with CREATE. CREATE's capabilities in connecting investigators with diversity-promoting community organizations and programs, designing and implementing evaluation plans, and developing key components of proposals are tremendous assets to UC San Diego's faculty and researchers. - **Sharon Franks, Senior Director, Research Development (RD), UC San Diego**

In 2013, CREATE designed an innovative education component for my NSF CAREER grant which led to funding support for two years. NSF program officers were impressed with this approach to Broader Impacts and recommended similar strategies in subsequent grants. This year, NSF funded another research grant for my lab focused on synthetic biology, in part due to my work with CREATE [with CSSI team member Nan Renner]. - **Neal Devaraj, Professor, UC San Diego, Chemistry and Biochemistry**

CREATE has been instrumental in a cross-discipline, cross-institute effort to create a new Center for Science and Technology. As a UCSD faculty, it was incredibly helpful to learn from the experts at CREATE, brainstorm new educational programs, and initiate efforts to engage the broader community. I look forward to continuing this work and joining CREATE in new efforts in the future! - **Jazz Dickinson, Asst. Professor, UC San Diego, Cell and Developmental Biology**

For the newly commissioned Scripps Ocean-Atmosphere Research Simulator (SOARS) with grand plans for Outreach, Education, and EDI, we envision leveraging CREATE STEM Success Initiative staff, knowledge, and K12 networks to have the greatest positive impact. Many research groups, including the Center for Aerosol Impacts on Chemistry of the Environment (CAICE), will use SOARS to advance science and EDI through strategic outreach and education. We know that grant funding is highly competitive and strong plans for Broader Impacts through outreach and education can make the difference, resulting in successful proposals. Nan Renner (Birch Aquarium, CSSI staff) and Cheryl Peach (Scripps, CSSI advisor and Internal Board member) have been instrumental in helping to create our strategic plan for EDI at SOARS. We rely on their expertise to advance our goals for bringing benefit to society through both science and education. - **Grant Deane and Dale Stokes, Scripps Institution of Oceanography, SOARS PIs; Kim Prather, Distinguished Chair in Atmospheric Chemistry and Distinguished Professor at Scripps Institution of Oceanography and the Department of Chemistry and Biochemistry, CAICE PI**

Federal funding agencies increasingly are grappling with how to diversify STEM college and career pathways, including through broader impacts (NSF) and "Inclusion" sections (NASA pilot) in research awards. The CREATE STEM Success Initiative (CSSI) at UCSD is a national leader among R1 universities in proactively developing capacity to address this growing demand. In its proposal services (e.g., broader impacts and evaluation) CSSI connects researchers to its exemplary externally funded projects and, via its extensive networks, to the STEM ecosystem in San Diego, California, and beyond. This cannot be accomplished without the intellectual and human infrastructure that CSSI has built at CREATE to address this important University service. CSSI is a capacity building investment that supports both the research and community service enterprises at UCSD, as well as UCSD efforts to diversify its student population, particularly in STEM fields. The model for CSSI is one in which researchers have access to these services as they write their proposals. These services are necessarily pro bono as the funds for the time spent on proposal writing cannot be drawn from existing awards. For a largely self-supporting entity like CREATE, making the CSSI activities self-supporting as well is not a workable model. Moreover, to my knowledge no funding agency is issuing solicitations for universities to engage in this work with federal support, rather they view the responsibility as lying within the institutions supported through research awards. I write this to emphasize the importance, especially now, of continuing to support CSSI and specifically CSSI staff at CREATE. They have become an integral part of the University's capacity to write compelling and successful proposals that fund not only excellent research, but exemplary education, outreach and EDI work. - **Cheryl Peach, Ph.D., UC San Diego, Director, Scripps Educational Alliances, Scripps Institution of Oceanography**

Dr. Joel Brown and Dr. Monica Sweet from CREATE have been instrumental in the preparation of our large multi-institutional proposal to the NSF program to support low-income transfer students from community colleges into UC San Diego's Engineering program. The NSF Program Director has recommended the proposal for funding, so we are cautiously optimistic that our proposal to this highly competitive program will be funded soon. We could not have gotten this far without Dr. Brown and Dr. Sweet specifically, and CREATE more broadly! - **Bill Lin, Professor and Chair, UC San Diego Electrical & Computer Engineering**

I am an assistant professor of bioengineering. CREATE worked with me to develop and execute a lesson study and evaluation plan in order to introduce nanotechnology concepts into high school classrooms near the U.S.-Mexico border. The support CREATE offered was crucial for successful funding of my NSF CAREER application. - **Ester Kwon, Assistant Professor, UC San Diego Bioengineering**

CREATE is a critical office on campus that allows UCSD researchers to connect with outreach and education activities in our community. Beyond broadening our research impact, these efforts are important for securing research funding from agencies that support education activities as part of awards. I collaborated with CREATE on the application for a 5-year project that was awarded by NSF. Many of my colleagues have had similar experiences with CREATE over the past 5-10 years. - **Itay Budin, Assistant Professor, Chemistry & Biochemistry, UC San Diego**

I am a research scientist at the department of cognitive science. I am PI in two NSF grants totaling 2.75 million dollars, with the goal of increasing the participation of underrepresented groups in science. My work is reaching tens of thousands of children across the county and hundreds of thousands across the nation, and increasing the visibility of UCSD and its researchers. Getting my grants would not have been possible without the help of CREATE staff, who connected me with education institutions across the county and allowed me to collect experience and pilot data to make strong applications. My current work reaching underrepresented students and securing more funding would be made very difficult without the participation of CREATE staff, their valuable network, and their knowledge of the education system. CREATE is a big reason for me to be at UCSD. I think that if UCSD is serious about reaching the community it should give CREATE full support. - **Victor Mincez, Asst. Research Scientist, UC San Diego, Cognitive Science**

The CREATE team has been instrumental in the successful development and design of my broader outreach program. The program was well-received by the NSF CAREER reviewers where I was able to secure the grant in my first attempt! I would like to particularly thank Monica Sweet for taking the time in working with me on the evaluation and education component of the grant. I could honestly say that without her assistance, my proposed educational plan [involving Miramar community college] wouldn't have been as impactful. I'm extremely grateful for the CREATE team! - **Sonya Neal, Asst. Professor, UC San Diego, Biological Sciences**

As a Computer Science PhD, I had no knowledge of developing and sustaining long-term relationships in the K-12 space such that I could MAKE A DIFFERENCE in Computer Science education in our local schools. CREATE has provided me that entree and street cred with districts, schools, and teachers. Now, I have trained hundreds of K-12 CS teachers, I have created CS curriculum being used in San Diego Unified to bring CS to ALL students in 3rd, 4th, and 5th grade, and I have (due to CREATE's staffing and skills) a reputation for getting projects done and making an impact that make grant officers reach out to us. In my personal move from the CSE department to EDS, it was my experience with CREATE and knowing how far they would take my work in ways I could not alone, that kept me at UCSD. - **Elizabeth "Beth" Simon, Teaching Professor, Education Studies**

I have been teaching engineering at UCSD for over 20 years, and have had a strong desire to share my passion for STEM beyond the scope of the university and especially in the K-12 community. However, honestly, I do not have the pedagogical background and expertise required for effective curriculum development for younger students. Together with another engineering faculty member, we created a software tool to teach K-12 students how to improve their spatial visualization ability which has been shown to increase success in STEM. We partnered with CREATE so that they could assess our success in a trial in a local high school. During this trial Monica Sweet from CREATE observed the classroom as well as our material. She gave us an honest assessment that indicated areas where both students and the teacher had a lack of engagement. This was hard to hear, but led us to improve our material. Since then our new software package has been much more widely received, and over 4000 K-12 students have successfully used the material this past year, and we have seen significant growth in interest. Without CREATE our ability to create effective educational content that could have a significant educational impact would be significantly limited. If UCSD is to encourage its faculty to engage in K-12 outreach, then CREATE is a vital component of successful educational content development. -**Nate Delson, Assoc. Teaching Professor, UC San Diego, Mechanical and Aerospace Engineering**

I'm writing to provide my strongest possible endorsement for continued financial support of core staff at CREATE. Over the past two years, I have worked closely with CREATE staff to launch a new cross-disciplinary initiative called Pathways2AI, which aims to broaden participation in artificial intelligence (AI) and promote AI literacy among members of the general public. To pursue this goal, Pathways2AI connects UCSD faculty/staff/researchers with several community partners across San Diego County, including K-12 teachers and administrators. We simply cannot have forged these connections without the broad expertise, tireless dedication, and bottomless ingenuity of the entire CREATE staff. I cannot imagine a path forward for Pathways2AI without their sustained contributions. If there is any other way I can express my support for CREATE, please do not hesitate to let me know. - **Judith Fan, Asst. Professor, UC San Diego, Psychology**

The CREATE staff have been an essential resource in developing funding proposals for major agencies, including NSF and NASA grants, helping me in particular to develop appropriate broader impact plans, plan for IRB proposals, and to identify partners in the community for student and teacher research engagement. This is a unique capability we have at UCSD and one that has greatly enriched our research and training mission. - **Adam Burgasser, Professor, UC San Diego, Physics**

The UCSD CREATE staff have been an invaluable resource for my grant writing, specifically Susan Yonezawa and Joel Brown helped me improve my broader impacts statement for my NSF CAREER award (which I won) significantly. It has been a pleasure to work with them and I would have not gotten the award without their help. Moreover, Beto Vasquez has been working with me on outreach opportunities for low-income/underserved communities, and it's been super nice as a new faculty member to get "plugged in" to the local community and do science events. We participated in two CREATE events, and will do more in the future. I think CREATE is doing a fantastic job. - **Boris Kramer, Asst. Professor, UC San Diego, Mechanical and Aerospace Engineering**

The CREATE staff have been instrumental supporting my research as a faculty member at UCSD. As an incoming faculty member in mid-2020 I met with Associate Director Susan Yonezawa and told her about a middle school science classroom intervention-based project I was working on in collaboration with science educators at Cabrillo National Monument. She connected me with Monica Sweet, co-Director of Research and Evaluation at CREATE, who

provided me with invaluable advice for obtaining IRB approval and planning an assessment of our intervention. I currently have a manuscript in submission from these efforts. Alec Barron is a key partner on a level II NSF DRK-12 Grant - he has contributed heavily to the proposal planning, writing, and if funded will lead one aim of the grant. We received a "highly competitive" ranking for an initial submission of this proposal this year, and plan to resubmit in the fall. For an initial submission this is incredibly promising, and a lot of credit has to go to Alec for his guidance and connecting us with additional partners. Alec's expertise has helped shape and strengthen the proposal, and our other collaborator and I are incredibly grateful to have him on our team, to have access to educator networks through CREATE overall, and to have the support of the CREATE staff. - **Claire Meaders, Asst. Professor, UC San Diego, Cell & Developmental Biology**

I am an Assistant Professor in the Mechanical and Aerospace Engineering Department. I have worked with the staff at the CREATE center to put together educational components of multiple grants, and I have nothing but great things to say about the staff and the overall experience. They are always extremely responsive, enthusiastic, and creative in helping me craft this component of the grants. Susan and Beto helped me put together the educational components of multiple grants. They spent a significant amount of time and effort brainstorming potential ideas with me. They were extremely passionate about the work, and they also made sure that there was interest from the communities that we were hoping to partner with. I am very happy with the final plans we came up with and am excited to implement them this year. For my NSF CAREER proposal, I worked closely with Monica to develop an evaluation plan for the educational component. Not only did she help me create the overall structure, but she then provided extremely helpful edits and feedback on my draft. I really enjoyed the overall experience of working with Monica, and I learned a lot in the process. Now that the grant has been funded, I am looking forward to the opportunity to work with Monica to execute the evaluation plan. - **Tania Morimoto, Asst. Professor, UC San Diego, Mechanical and Aerospace Engineering**

I am an Associate Professor in the Department of Chemistry and Biochemistry. CREATE has been instrumental for the development of the outreach component of my NSF CAREER grant. In particular, Alec Barron and Susan Yonezawa were tremendously resourceful to link me with teachers and administrators of Orange Glen High School in Escondido to organize an outreach activity with high school students in April 2022. This activity intended to illustrate to a broad audience how topological insulators work. Alec was not only the link, but he thought deeply about all the mechanics and the bureaucracy involved in making our project successful, and helped us carry out the activity at the school. I believe that CREATE is a crucial entity at UCSD that helps UCSD faculty establish meaningful educational connections with the broader communities in San Diego. - **Joel Yuen Zhou, Assoc. Professor, UC San Diego, Chemistry & Biochemistry**

I just finished my third year in the Department of Education Studies at UCSD. Looking back on the past three years, from day one, I have received numerous support from the members of CREATE. CREATE has been one of the critical support systems I found since I started at UCSD, from the grant-writing support, project and evaluation design, to outreach efforts involving K-12 populations in San Diego. Through my own work as well as the work of Pathway to AI, a collaborative effort of UCSD faculty members to promote AI literacy in K-12 classrooms, multiple collaborative opportunities have emerged involving or sometimes initiated by the members of CREATE. Moreover, as a CS educator, CREATE's support for the Computer Science Teachers Association's San Diego Chapter has been invaluable for the success of the organization. I don't think any of such efforts could have been successful without CREATE's support. - **Amy Eguchi, Assoc. Teaching Professor, UC San Diego, Education Studies/ Computer Science Education**

I have been working with CREATE and Monica on evaluations for my NSF REU and CAREER projects. Even before these projects were awarded, CREATE has helped me shape my education, outreach, and evaluation plan and helped make my proposal stronger. CREATE has provided a critical and unique service for these projects by tailoring their evaluation methods and criteria according to my project needs and within budgetary constraints. It has been a pleasure working with CREATE and Monica, and I strongly support the continuation of their wonderful and much needed work at UC San Diego and beyond. - **Kenneth Loh, Professor and Vice-Chair, UC San Diego, Structural Engineering; Director, Center for Extreme Events Research**

I am a professor and outgoing chair of the Department of Sociology. I write in support of continued or enhanced funding for CREATE staff. My research, and especially my courses, have long benefited from the support I have received from the research scientists and other staff who work at CREATE. They have connected me with scores of local educators, who have welcomed my undergraduate and graduate students into their classrooms for research purposes. CREATE staff's knowledge and connections with local school leaders and practitioners have been fundamental to my community-oriented, "changemaker" courses. I know that several graduate students and faculty colleagues have similar experiences to my own. Thank you for your continued commitment to this outstanding campus center. - **Amy J. Binder, Professor and Chair, UC San Diego, Sociology**

CREATE plays a vital role in supporting campus research and evaluation activities in the realm of K-12 and postsecondary education. My most recent interaction with CREATE came through Susan Yonezawa. Susan's extensive work with the K-12 STEM community led the Computer Science Teachers Association (CSTA) to approach her about becoming involved in what became a successful multimillion dollar bid for a grant. The grant involves professional development for high school teachers who teach AP Computer Science Principles, to help teachers recruit, and then support, English Learners into this course. My team in the Department of Economics, the San Diego Education Research Alliance, became involved and is running the quantitative side of an evaluation, with Susan Yonezawa leading the qualitative evaluation. She and her team have exhibited professionalism throughout. Her extensive contacts in the STEM K-12 community have also assisted the CSTA to recruit many of the schools in California that are now participating in the project. In short, I have the highest regard for the contributions that Susan and her team are making to STEM education and research on STEM. - **Julian Betts, Professor, UC San Diego, Economics; Executive Director, San Diego Education Research Alliance (sander.ucsds.edu); Research Associate, NBER**

I have been very lucky to be able to get nearly instant help, and sometimes from my last-minute requests for proposal development and due diligence. In particular, Joel Brown has been giving me lots of great ideas and great advice to improve my proposal. He helped polish and improve my proposal to much better quality, which is critical for the grant's success. I will definitely need continuous help and support from the CREATE team in the future. - **Zheng Chen, Asst. Professor, UC San Diego, NanoEngineering**

CREATE is a key partner to our NSF-funded Materials Research Science and Engineering Center. Through their surveys, assessments, and analyses, they provide an independent voice that allows us to continually improve our extensive education and outreach programs. - **Michael Sailor, Professor, UC San Diego, Nanotechnology & Chemistry/Biochemistry**

I am the HPC/CI Training Lead at the San Diego Supercomputer Center. I am deeply appreciative of the support provided to me from the CREATE program. I worked with Monica Sweet to help develop the evaluation components on two recent NSF CyberTraining proposals. In both cases Monica's input provided valuable insight and helped guide program deliverables. In the case of the multi-institutional proposal, her responsiveness and guidance helped me to define clear deliverables, including BPC/EDI goals, for the program. - **Mary Thomas, HPC/CI Training Lead, UC San Diego, San Diego Supercomputer Center**

The CREATE program staff members (including Osvaldo Soto, Monica Sweet, Christina Gonzalez, Laura Santos, and Alec Barron) were extremely helpful to polish my proposal for the NSF CAREER grant. They especially helped make the educational part in the proposal more convincing and appealing. - **Ming Xiao, Asst. Professor, UC San Diego, Mathematics**

My interaction with CREATE in general and Monica Sweet, in particular, are quite positive. She was integral in an NSF IRES proposal we submitted in 2020 where she co-designed our proposed evaluation plan. Unfortunately the proposal wasn't funded, but the evaluation plan scored well and we plan on resubmitting in the Fall with Monica's contributions. - **Eric Fullerton, Professor, UC San Diego, Electrical & Computer Engineering; Director, Center for Memory & Recording Research**

I'm the Director of Education and Training at the San Diego Supercomputer Center. I'm extremely grateful for the support I received from CREATE. Working with Ovie Soto, I was able to create a DoD-funded summer program for high school math teachers that enabled them to integrate computing and technology into their classrooms. More recently, I engaged with Monica Sweet to develop the evaluation component of two proposals that are currently under review by the NSF's CyberTraining program. - **Robert Sinkovits, Director of Education and Training, UC San Diego, San Diego Supercomputer Center**

CREATE has been absolutely critical for the strong positive evaluation of the cross-campus NSF Biointegration proposal that we submitted in Jan 2021. Even though we did not win the award, the reviewers were very positive about the assessments we provided. Monica and her colleagues were able to work with us on very short notice to provide a strong formative and summative assessment program. Without this, our proposal would have been quite weak. I look forward to working with the amazing staff at CREATE again in the near future. - **Padmini Rangamani, Professor, UC San Diego, Mechanical and Aerospace Engineering**

I am a Teaching Professor in Structural Engineering who became passionate about improving the way we teach engineering at the K-12 and undergraduate levels. However, I was never formally trained in conducting pedagogical research. Specifically, I was unfamiliar with the need for independent assessment/evaluation for research projects until I was introduced to CREATE early in my teaching career. Over the years I have worked closely with Larry McClure and Monica Sweet on a number of educational grant proposals. CREATE has provided guidance on the research and assessment plan and has served as independent evaluators on some of my internal/local research projects. While none of the NSF grants have been funded, many have made it to final review stages (one is currently far in the review process). Both Larry and Monica taught me the importance of developing research methods and analysis techniques based on the latest pedagogy.

Monica especially guided me in learning how to develop evaluative processes that not only ensure that our project benefits from appropriate, rigorous, external input as part of a continuous improvement process, but the evaluation plan promotes accountability and addresses the quality of our research. CREATE has been invaluable in my ability to succeed as an educational researcher at UC San Diego. Furthermore, I have worked closely with Susan Yonezawa on a number of outreach efforts to the local K-12 community. She provides invaluable connections to San Diego school districts and educators and helps facilitate introductions to support all of my community outreach endeavors. CREATE is a very unusual entity on campus that makes connections between the cutting-edge research and outreach that is occurring internally at UC San Diego with the broader San Diego community. - **Lelli Van Den Einde, Teaching Professor, UC San Diego, Structural Engineering**

Working with Monica Sweet and CREATE on campus has been a significant component to the success of the Scripps-GEO proposal and award at the Scripps Institution of Oceanography. We are also planning for a resubmission of the NSF REU site at Scripps and Dr. Monica Sweet and the CREATE team would be important partners on that proposal. Together, these projects are critical in our efforts to recruit and retain diverse students in the geosciences, and the quality and detail in the evaluations provided by Dr. Sweet directly support and improve our efforts. - **Jane Teranes, Teaching Professor, UC San Diego, Scripps Institution of Oceanography**

CREATE has been continuously one of UCSD's critical centers for enhancing participation in STEM. In our program "Design for Launch", we work to improve STEM representation by demonstrating exciting aspects of space-based science and engineering. Alec Barron and our other colleagues in CREATE have significantly helped us to (i) identify community partners and implement Community Engaged Learning and (ii) develop educational modules about engineering and Space Science for teachers and students. I wholeheartedly support CREATE and recommend them as an invaluable resource to other faculty in their outreach efforts. - **Maziar Ghazinejad, Asst. Teaching Professor, UC San Diego, Mechanical and Aerospace Engineering**

CREATE has a long history of collaboration and support with EDS faculty, researchers, and students. We have worked with the staff and research professionals of CREATE as an outside evaluator on large National Science Foundation (NSF) STEM Teacher grant proposals. An example of this effort resulted in more than \$6 million in grant

funding in the Noyce Teacher Scholar Program over 9 years supporting new STEM Teacher development. CREATE was responsible for the overall evaluation of the program and reporting results to NSF program officers. CREATE has also supported our doctoral students in GSR positions, giving them the opportunity to engage in authentic, community based research with highly qualified researchers. CREATE is a vital partner with the EDS Teacher Education Program through the San Diego Area Writing Project, the UC San Diego Math Project, and the San Diego Science Project. These professional development projects have proven effective learning opportunities for our Teacher Credential Program graduates as they enter the teaching profession. - **Christopher Halter, Teaching Professor (Senior LSOE), California Teach Secondary Mathematics & Technology Education Co-Director, and Chair, Education Studies (EDS), UC San Diego**

The CREATE staff truly serves an essential role at UCSD and in the larger educational community, by connecting the expertise of multiple departments and centers at UCSD with local school districts and non-profits. As the Secondary Mathematics Lecturer and Supervisor in EDS, I have partnered with Drs. Yonezawa and Soto on many initiatives, including an NSF Noyce grant proposal. I most admire how they have advocated for equity-centered, rigorous mathematics education across our region. They have leveraged large-scale grants to positively transform mathematics teaching and learning, by leading high-quality, research-based teacher professional learning, such as hosting workshops led by UCSD mathematics professors to spearheading partnerships with the San Diego Supercomputer Center to integrate coding into high school mathematics. CREATE's bold and innovative initiatives have benefited thousands of local teachers, students, and families in San Diego County. - **Erica Heinzman, Lecturer/Supervisor Secondary Education, Department of Education Studies, UC San Diego**

want to express my gratitude to the staff of the CREATE program at UC San Diego. In the summer of 2018 and 2019, Dr. Alberto Vasquez from the CREATE program helped me organize and recruit students for the ECE Department's summer engineering outreach programs. Their contributions and support were essential for implementing the summer programs. Dr. Vasquez is currently collaborating with me in organizing the third STEM workshop in the summer of 2022. - **Saharnaz Bahgdadchi, Assistant Teaching Professor, Electrical and Computer Engineering**

CREATE has given me excellent input to design educational plans for my NSF proposals. My NSF CAREER got great input regarding the evaluation of my activities from CREATE, and I also submitted an educational grant to facilitate the access for research for transfer students in two-year graduation programs. - **Professor Oscar Vasquez Mena, Department of Nanoengineering**

SCIENCE Class (a jail outreach program) has collaborated closely with CREATE from the very beginning of our program's inception. CREATE has been instrumental in helping us design and run our program by providing valuable insight into STEM communication techniques and methods for equity-minded outreach, as well as generously lending us resources for the hands-on experiments that we conduct in our classrooms. Our program truly would not be what it is today without CREATE. - **Alana Gibson, Graduate Student, Biological Sciences**

Community partners (a sample)

Through my role as the Director of the Southern California Professional Development Federation, I have had the good fortune to collaborate with and to see the positive impact from UCSD CREATE. While serving 27 school districts, 6 charters, 2 community colleges in addition to UCSD and CSUSM, I have heard from district and university leaders on the value of the CREATE programs and how these programs made a difference to their teachers and ultimately to their students. Whether it is funding from the Gates Foundation to address the much needed area of math instruction through the San Diego Math Network, or the ongoing work of Math for America providing much needed professional development, or an opportunity to host school leaders at the UCSD Design and Innovation Building to learn about their program, or resources for much needed SEL and parent programs, UCSD CREATE delivers. In addition to the many grants that they secure and the opportunities that they help to create for the region, they also provide the research to support the understanding of the work. They are thoughtful and valued thought partners in our region who are looking to the future with school leaders. UCSD CREATE has made a huge difference

in their many years of service and they help to set UCSD apart by demonstrating their commitment to the K-16 community as a whole. I can say without reservation that I, along with our local school leaders, value the amazing team from UCSD CREATE and the work that they do to inform, guide, and support our local schools. - **Brenda Hall, Director, Southern California Professional Development Federation**

CREATE staff was an incredible support to PIQE STEM Family workshops. The participation of CREATE staff members in our classes with first-generation and immigrant families helped them see new STEM career opportunities for their children. - **Carmen Russian, Executive Director Parent Institute for Quality Education (PIQE)**

CREATE is a vital leader in K16 education in the San Diego region and across the state. When I was at USD, CREATE was often the first institution I would reach out to partner on grants and initiatives. In my current role at San Jose State University, I continue to look to CREATE as a model for community-engaged partnerships and equity-focused leadership. When colleagues at other CSUs have questions about partnering with UCs and K12 districts, CREATE is the first resource that I point them toward. - **Heather Lattimer, Dean and Professor Connie L. Lurie College of Education, Acting Dean, College of Social Sciences, San Jose State University**

Our CREATE partners have been integral to our 8th grade on track CARE Network, a five-year Gates funded project serving 17 schools across Southern California. They have assisted with program design, school coaching, and convening facilitation, in addition to providing critical expertise around complex instruction, incorporating student voice, and mathematics education. We look forward to our continued collaboration. - **Daisy Sharrock, Ed.D., Director, CARE Network, High Tech High Graduate School of Education**

It is my pleasure to offer my full support to the ongoing funding of the CREATE team at the University of California San Diego. For the past two years Minhtuyen Mai and the entire team have worked with me in my role at the San Diego County Office of Education to envision an Eco System for high school eSports that focuses on academics, specifically school to college and career. Our work brought together SDCOE, Sweetwater Union High School District and UCSD Triton Gaming to create a mentor program that focused on traditionally marginalized students, specifically Latinas. The mentorship lasted six months, with students from Eastlake High meeting virtually with members of Triton Gaming twice a month to learn from the curriculum that was co-created by SDCOE and CREATE. In addition to the bi-monthly meetings, students attended an end of the year event, met UCSD alumni who work in the gaming industry, and most importantly, they were exposed to the college world of gaming and careers. None of this would have been possible without CREATE. For the upcoming 2022-23 academic year, we are in the planning stages for expanding the mentor program, working in a summer experience, and pursuing grant opportunities to continue to grow eSports in all 42 districts throughout San Diego County. I cannot stress how much a partnership with an organization like CREATE means to SDCOE. - **Alicia Butters, Director of Educational Technology, San Diego County Office of Education**

The UCSD CREATE team supports the execution of the San Diego Unified School District US Department of Education, Innovation and Research grant. The Coding Our Future initiative has been integral to the continued development of Computer Science curriculum in elementary and middle school classrooms. Additionally, the CREATE team has helped successfully write and execute the CS LISTEN and CS for EL grant programs that raise awareness of the barriers and equity issues that exist and impact student access to quality computer science education programs. These programs have a direct impact on students from all backgrounds accessing computer science curriculum and career pathways. College Career and Technical Education (CCTE) looks forward to continuing the collaboration with the CREATE team during the 2022-23 school year. - **Tom Anti, College, Career and Technical Education (CCTE) Specialist, San Diego Unified School District**

CREATE is an essential partner to CSTA across multiple projects. From my first few days as Executive Director at the Computer Science Teachers Association, I saw the key role that CREATE has played in supporting our San Diego chapter. Since then I've been lucky to partner with many members of the CREATE team to write and receive over \$9 million in federal grants to develop and implement high quality, equity focused, computer science professional development across the country. We're lucky to have such strong partners in our work to expand access and

attainment in computer science. - **Jake Baskin, Executive Director, Computer Science Teachers Association (national)**

CREATE staff supported a team of educators from Escondido Union High School District, Vista School District, San Diego Unified School District, SDCOE, and Sweetwater School District to co-research suggestions of what works and does not work for low- income, African American and Latinx students, young women, and other historically disadvantaged subgroups in Computer Science pathways. UCSD CREATE has been supporting staff to use our students' voices to understand structural and cultural barriers within schools, in this instance participation in computer science classes. The work supported through CREATE staff has made a marked impact on the computer science programming in our district. - **Mia Funk, Director of Assessment and Special Programming, Escondido Union High School District**

UCSD CREATE has been a crucial and influential partner in San Diego Unified School District's ongoing efforts to improve the UTK-12 student outcomes and experience, and in particular for our Black youth, English Language Learners, and students receiving special education services. In our San Diego Enhanced Math (SDEM) Initiative, CREATE has collaborated and advised our leadership team to modernize mathematics, support student-centered pedagogy, and foster asset-based and equitable grading practices. - **Alexandra Martinez, Instructional Coordinator, UTK-12 Mathematics, San Diego Unified School District**

CREATE has been instrumental in making our Federal Education Innovation Research Grant a success. They have supported us with creative problem solving and connected us to needed curricular and professional learning resources when our previous partner exited the project. CREATE staff are tremendous partners; they have a wealth of knowledge and an extensive network behind them that can support a wide range of grant related needs/issues. - **Michael Goodbody, Director, STEM Innovation, San Diego Unified School District**

CREATE is a uniquely critical hub in the San Diego region connecting districts and schools with higher education and research partners. I have worked with CREATE for almost twenty years, starting when I was the Executive Director of the Cal Teach program at UCOP and now as an independent consultant working to improve mathematics teaching, learning, excellence and equity in the San Diego region. CREATE's network is invaluable in supporting ambitious and innovative projects. Susan Yonezawa in particular is absolutely the best at keeping an eye open for new opportunities and setting up strategic contacts between key individuals across the multitude of interacting education systems in the area. - **Patrick Callahan, independent consultant, San Diego**

Building and maintaining networks of cross-sector partners aligning and coordinating their work and resources to support community-expressed needs and interests through STEM education is a vital and necessary effort. That effort is positively impacted in substantial ways by the work and reputation of the UCSD CREATE STEM Success Initiative. The Initiative collaborates by bringing University resources to the table whether as a lead on a grant, or by bringing students who can advance their education through real-world efforts, or by leveraging CSSI expertise in engaging community members and organizations, elected officials, and research scientists, to name a few. The weight of the CSSI's involvement also brings partners to the table who would otherwise be very difficult to engage for the broader array of STEM education providers. Those partners are able to provide the support for smaller organizations who provide services that the CSSI cannot - whether by expertise or by bandwidth - and thus create a sum that is greater than its parts. This effort is not that of a single organization and it, and the community, are served best when we are working in collaboration - not siloed - and everyone brings their expertise to the table. As the Central Project Office Lead for the San Diego STEM Ecosystem, I wholly value the efforts and commitment of the UCSD CREATE STEM Success initiative to putting STEM education at the service of the community and recognize our collective success would be negatively impacted by losing them as a partner. - **Eric Meyer, Assistant Director of Education, Fleet Science Center**

UCSD CREATE has become an important partner of Generation STEAM and Biocom California in helping us carry out our mission to empower the next generation of STEAM visionaries through education and exploration. Our partnership with UCSD CREATE, inclusive of their Barrio Logan Science & Art Expo and, generally, their deep-rooted relationships in the community, helped us deliver a safe and impactful version of the San Diego Festival of Science & Engineering during a pandemic year, helped us fulfill sponsorship requirements, and even helped us secure funding for important community work. UCSD CREATE is an invaluable part of the community and an integral component to delivering high-quality STEAM education to underserved communities in our region. - **Silvana DelPiccolo, Director of Community Relations, Generation STEAM**

Dr. Vasquez and the UCSD CREATE STEM Success Initiative have been an invaluable resource for the students on the LMEC campus, helping to establish and facilitate our science club and creating projects for/facilitating enrichment field trips for our student body. The academic and scientific enrichment he has provided is one of the things that students and parents consistently highlight as standouts at LMEC. I feel fortunate to work with Dr. Vasquez and UCSD CREATE, and I hope we will be able to continue to collaborate with them in the future. - **Melanie Kray, Principal, Logan Memorial Education Campus**

Youth of color are historically underrepresented in STEM across the nation, but CREATE STEM Success has engaged and created opportunities for the youth of color in Council District 4 to be more involved in STEM. With the annual Southeast San Diego Science & Art Expo and hosting science clubs at our local schools, CREATE STEM is activating interest for our youth and promoting equitable experiences. These programmatic efforts have worked toward transforming our district and inspiring the future generations by exposing them to the STEM field. - **Monica Montgomery Steppe, City Council President pro Tem, City of San Diego, District Four**

I am writing on behalf of UC San Diego's CREATE STEM Success Initiative and the monumental positive impact their work has contributed to families and residents within my district. Since 2019, the Barrio Logan Science and Art Expo has attracted thousands of Barrio Logan and Logan Heights families and residents to participate in hands-on STEAM activities. These activities, which many families would not have but for the Barrio Logan Art & Science Expo, help support the community by providing amazing, unique, and fun ways of learning about science. The Barrio Logan Science & Art Expo provides underrepresented children in communities like Barrio Logan and Logan Heights with the platform to learn that there are interesting, fun and profitable career opportunities for them in STEM fields. I believe continued funding for UC San Diego's CREATE STEM Success Initiative is valuable and necessary to bring new learning and career opportunities to the underrepresented children within my district. - **Vivian Moreno, City Council member, City of San Diego, District Eight**

We are deeply honored by these testimonials from the campus and community partners we've supported.

Highlights of our Year 9 work are detailed in the remainder of this report. These highlights are just a slice of what we've done this year.

All our best, and for the larger CSSI team,

Mica Pollock
Director, CREATE (Center for Research on Educational Equity, Assessment, and Teaching Excellence)
Professor, Department of Education Studies, UC San Diego

(CREATE CSSI team members contributing to this report and the work in it are named throughout. Report produced additionally by Laura Santos, Karla Covarrubias, and Minhtuyen Le Mai. Additional CSSI project support is provided by CREATE staff Yuka Nakanishi, Christina Gonzales, and many more.)