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Panel 1

What is known about the impact on Undergraduate and Graduate Students of Higher Education's Response to COVID-19?

Panelists:

- Craig Ogilvie, Montana State University
- Felicia Jefferson, Fort Valley State University
- Sherry Pagoto, University of Connecticut
- Cassandra Hart, University of California, Davis

Dr. Craig Ogilvie serves as Dean of the Graduate College and Associate Vice President for Research at Montana State University (MSU) since August 2019. He is leading a campus-wide discussion of how being at a Land Grant university impacts graduate students, e.g. intentionally developing students' commitment to equity and inclusion, engagement with the community, and collaborating to make progress on the most challenging problems that face our society. These values underpin recruiting, programs that help students transition to graduate school, and provides a focus for professional development and career planning. Dr Ogilvie is advancing graduate student well-being by embedding ten graduate well-being champions in departments. These champions bring workshops from experts on well-being across campus into departments. Dr Ogilvie serves as PI on an NSF RAPID grant on the impact of the Covid-19 pandemic on graduate students across the country. He also serves as PI of a ten-university NSF AGEP grant (CIRTL AGEP) that is implementing workshops in graduate programs across each university to improve the climate within research groups and is co-PI of an NSF INCLUDES collaborative grant (Aspire Alliance) to prepare graduate students to teach at community colleges. Prior to joining MSU Dr Ogilvie was at Iowa State University (ISU) where he served as Assistant Dean for the Graduate College, focusing on inclusion and graduate careers. He also led ISU's HHMI undergraduate STEM reform; a partnership across all the science and math departments that has transformed all the introductory science labs to inquiry-labs, added extended research projects into lab courses, provided interdisciplinary science projects for undecided freshmen, and added active learning to calculus. Dr. Ogilvie conducts research in nuclear physics publishing over 290 papers and has received over \$19M of awarded grants.

Dr. Felicia Jefferson is a tenured associate professor at Fort Valley State University. Through her teaching, research and community engagement activities, she partners with students and other scientists and educators to use science and engineering to solve problems in local communities and encourage STEM delivery mechanisms that broaden participation in these fields. Her work, which has been funded by multiple federal grants, has appeared in top science journals. The information Dr. Jefferson is presenting as a part of the NASEM Workshop on "Resilience and Innovation in Online Learning and STEM Progression" is based off of research funding from

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<u>National Science Foundation Award #2028573</u> and previous research regarding online learning published in the journal <u>Frontiers in Computer Science</u>.

Dr. Pagoto is a licensed clinical psychologist, Professor in the Department of Allied Health Sciences at the University of Connecticut, and Director of the UConn Center for mHealth and Social Media. She is also a Past-President of the Society of Behavioral Medicine. Her research is at the intersection of behavioral science, public health, and technology. Recently she has applied her expertise to study how the pandemic has impacted the health, wellbeing, and educational opportunities of undergraduate students. She has had federal funding for her program of research for 17 consecutive years and has published +200 papers in peer-reviewed journals. Devoted to science communication, she has contributed to the Washington Post, USA Today, US News and World Report, Chronicle of Higher Education, STAT News, Times Higher Education, MedCityNews, and Psychology Today.

Cassandra Hart is an associate professor of education policy. She evaluates the effects of school, state and national education programs, policies, and practices on overall student achievement, and on the equity of student outcomes. Hart's work has focused on online education in both K-12 schools and community colleges, school choice programs, school accountability policies, and effects on students of exposure to demographically similar teachers. She is currently working on a study funded by the Spencer Foundation looking at responses to COVID-19 in California community colleges.

Panel 2

What does student-centered online learning look like during COVID-19?

Panelists:

- Cynthia Brame, Vanderbilt University
- Viveka Brown, Spelman College
- Mays Imad, Pima Community College
- Maxwell Bigman, Stanford University
- Tam'ra-Kay Francis, University of Washington

Dr. Cynthia Brame is associate director at the Vanderbilt Center for Teaching and a Principal Senior Lecturer in the Department of Biological Sciences, where she teaches biochemistry. Informed by her own transition from bench-focused scientist to science educator, Cynthia focuses her work at Vanderbilt on helping STEM faculty identify, adopt, and develop evidence-based teaching practices that are good fit for their context and needs. Her book, Science Teaching Essentials: Short Guides to Good Practice, offers easily digested, practical, research-based information on a variety of teaching questions, from developing inclusive

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teaching practices to writing exams. She is also the co-editor, with Dr. Kristy Wilson of Marian University, of LSE's Evidence-Based Teaching Guides, which offer research-based guidance on topics ranging from inclusive teaching to group work to teaching modeling in the classroom.

Viveka Brown, Ph.D. is an Associate Professor in the Mathematics Department at Spelman College. Dr. Brown's research area is mathematics education. Her research examines various equity issues in math. In particular, she explores issues pertaining to Black girls and women in math. Recently, her research explores the lived experiences of Black women in STEM. A native Detroiter, she has been teaching and tutoring math since 2000. Her goal is to create avenues and solutions to increase the number of Black women and other underrepresented populations in STEM.

Mays Imad is a neuroscientist and professor of pathophysiology and biomedical ethics at Pima Community College, the founding coordinator of the Teaching and Learning Center, and a Gardner Institute Fellow. Dr. Imad's current research focuses on stress, self-awareness, advocacy, and classroom community, and how these relate to cognition, metacognition, and, ultimately, student learning and success.

Maxwell Bigman is a PhD student at the Stanford Graduate School of Education where is research focuses on innovative and equitable practices in CS education. Prior to beginning his doctoral studies he taught high school computer science in Los Angeles. His past work has focused on blended and personalized approaches to learning. His current research is on pedagogical strategies, course structures and learning tools for creating collaborative communities for learners and teachers in remote settings.

Tam'ra-Kay Francis is a STEM educator dedicated to developing strategies for reducing barriers and increasing student attainment of STEM certificates and degrees. To her scholarship Dr. Francis brings expertise in constructing culturally responsive professional teaching identities and creating equity-minded STEM curriculum. Her current work focuses on future faculty professional development and an examination of active-learning chemical demonstrations and scientific argumentation in general chemistry curriculum. Recently, Dr. Francis launched PR²ISM, an interdisciplinary professional development program that explores equity-minded teaching and research practices within STEM fields. She is the past STEM SIG Diversity Co-Chair and a founding member of the "People of Color Affinity Group" within the Professional Organizational Development (POD) Network in Higher Education.

Panel 3

Supporting Student Progress in STEM Learning During COVID-19

Panelists:

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- Erin Shortlidge, Portland State University
- Nayda Santiago, University of Puerto Rico, Mayaguez
- Eboni Zamani-Gallaher, University of Illinois, Urbana Champaign
- Keivan Stassun, Vanderbilt University

Erin Shortlidge is a tenure-track faculty member in the Department of Biology at PSU. Her path to academia has been a non-linear one. She was a professional contemporary dancer for over a decade before transitioning to earning her PhD in Biology in 2014. Her PhD work focused on the ecology and physiology of mosses and moss reproductive success. Here she was lucky enough to do field work in Lassen Volcanic National Park and in the South Shetland Islands on the Western Antarctic Peninsula. Through a postdoc at <u>Arizona State University</u> she transitioned to Biology Education Research (BER), and this is where she happily remains. She is excited to further explore the education ecosystem of PSU and beyond with members of the PSU BER group and collaborators across campus and the country. Erin is the PI of a NSF-funded Scholarships in STEM program (<u>S-STEM</u>), and is involved with a number of groups including the PSU <u>STEM Education and Equity Institute</u>, <u>CUREnet</u>, the <u>Student Experience Project</u>, <u>U-FERN</u>, <u>PNW LSAMP</u>, and others.

Nayda G. Santiago received the B.S.E.E. degree from University of Puerto Rico, Mayaguez Campus, in 1989, the M.Eng.E.E. degree from Cornell University in 1990, and the Ph.D. degree in Electrical Engineering from Michigan State University in 2003. Since 2003, she has been a faculty member of the University of Puerto Rico, Mayaguez Campus at the Electrical and Computer Engineering Department where she holds a position as Associate Professor. Nayda has been recipient of the 2008 Outstanding Professor of Electrical and Computer Engineering Award, 2008 Distinguished Computer Engineer Award of the Puerto Rico Society of Professional Engineers and Land Surveyors, the 2008 HENAAC (Hispanic Engineer National Achievement Awards Conference) Education Award, the 2009 Distinguished Alumni Award of the University of Puerto Rico, Mayaguez Campus, and the 2011 Women on the Forefront of the Puerto Rico Society of Professional Engineers and Land Surveyors. She is a member of SANCAS, Latinas in Computing, IEEE, and the ACM. She is one of the founding members of CAHSI and Femprof. CAHSI is the Computing Alliance for Hispanic Serving institutions. Femprof is a program to increase the number of females in the professoriate in computing related areas. Her areas of research include use of novel architectures for hyperspectral image analysis and low power software design. She teaches Computer Architecture and Capstone in Computer Engineering.

Eboni M. Zamani-Gallaher is professor of higher education/community college leadership and associate head of the Department of Education Policy, Organization, and Leadership at the University of Illinois at Urbana-Champaign. She is also associate dean of the Graduate College and director of the Office for Community College Research and Leadership (OCCRL). She holds a

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PhD in higher education administration with a specialization in community college leadership and educational evaluation from the University of Illinois at Urbana-Champaign. Her teaching, research, and consulting activities largely include psychosocial adjustment and transition of marginalized collegians, community college transfer, access policies, student development and support services. Dr. Zamani-Gallaher's research has been published in various journals and scholarly texts, including Equity and Excellence in Education, Higher Education Policy, and New Directions for Student Affairs. She has authored/edited seven books including The Case for Affirmative Action (Stylus Publishing), Working with Students in Community Colleges: Contemporary Strategies for Bridging Theory, Research, and Practice (Stylus Publishing), The State of the African American Male (Michigan State University Press), and The Obama Administration and Educational Reform (Emerald Group Publishing).

Keivan G. Stassun is the Stevenson Endowed professor of Physics & Astronomy at Vanderbilt University. He is also the founding director of the Vanderbilt Initiative in Data-intensive Astrophysics (VIDA). His research focuses on the formation of stars and planetary systems, which increasingly involves approaches at the interface of astronomy, physics, computer science, and informatics. Stassun currently serves as a general councilor of the American Physical Society and served for eight years as chair of the American Astronomical Society's (AAS's) Committee on the Status of Minorities. He's known for his leadership and distinction as a scientist and as an innovator in broadening the participation of underrepresented minorities in STEM fields. Stassun received the 2018 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. He earned a Ph.D. in astronomy from the University of Wisconsin at Madison. Stassun has served on numerous Academies' committees and was a member of the Astro2010 study group on education and public outreach.