



DUPONT SUMMIT 2013

..... Pressing Issues, Economic Realities

December 6, 2013 * Historic Whittemore House, Washington, DC

The Policy Studies Organization

Speakers

Danny Welsch – *American Public University System*

Daniel Benjamin – *American Public University System*

"Online STEM Labs: Myth or Reality"

Online learning is commonplace today; however, there are some that are skeptical about the effectiveness of online STEM labs. This presentation examines the concerns, the myths, the hype, and the reality of the effectiveness of online STEM labs. This presentation discusses the underlying principles, practices, and theories that enable the implementation of online STEM labs.

Biographies

Dr. Danny Welsch is Professor and Program Director for Science at American Public University. His M.S. is in Environmental and Resource Engineering from the State University of New York, College of Environmental Science and Forestry, and his Ph.D. is in Environmental Sciences from The University of Virginia. Dr. Welsch's research interests focus on hydrology and biogeochemistry of small watersheds. He has worked in Shenandoah National Park, the Appalachian Mountains, and the mountains of Montana. His research interest address issues related to the flux of water, carbon, and energy between soils, streams, vegetation, and the atmosphere.

In his role as Program Director at American Public University, Dr. Welsch is dedicated to using creative and innovative techniques to teach science in an online format. Together with his faculty, he is a pioneer in teaching traditionally hands-on lab sciences in an online format, using technology such as simulations, virtualizations, games, and where appropriate, actual hands-on instruction.



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Biographies (Continued)

Mr. Daniel Benjamin is a graduate of the prestigious Indian Institute of Technology (IIT) (www.cbsnews.com/stories/2003/06/19/60minutes/main559476.shtml and www.businessweek.com/1998/49/b3607011.htm). He has over twenty years of experience providing Information Technology and Management education and consulting solutions in the public and private sectors. His clients include the White House, the U.S. Senate, the Department of Defense (DoD), the Department of Treasury (DoT), the Federal Aviation Administration (FAA), and the Department of Education (DoEd).

Dan is an IT industry influencer; he served on the Executive board of the Federal Information Systems Security Educators Association (FISSEA). He also served on the Executive Committee of the Association of Computing Machinery (ACM) SIG on IT Education (SIGITE). He has also published/presented papers related to Learning Management Systems at the International Association for Computer Information Systems (IACIS) and the Information Systems Educators Conference (ISECON).

As Dean of the School of Science, Technology, Engineering and Math (STEM), Mr. Benjamin directs the administrative, curricular, and teaching aspects of 11 degrees, 35 certificate programs, and over 250 courses in Environmental Science, Information Technology, Mathematics, Science, and Space Studies programs. He engages 7 Program Directors, 2 Faculty Directors, and over 350 adjunct / full-time faculty to administer and teach over 25,000 student registrations in over 250 courses. He maintains a high level of quality in the curriculum and the classrooms in his school and uses educational technologies to maximize the learn experience. The Higher Learning Commission approved his proposals for undergraduate Information Technology, undergraduate Information Systems Security, and graduate Information Technology degree programs. The concentrations in the graduate program are IT Project Management, Information Assurance and Security, and Digital Forensics.



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Biographies (Continued)

He authored books on Java and Oracle that were published by Element-K Press (formerly Ziff-Davis) and McGraw-Hill/Oracle Press. He made many winning presentations that have resulted in multi-million dollar contract awards. He developed IT curriculum for three universities using multi-tiered Learning Outcomes Assessment (LOA) Architectures.

He established successful Information Technology, Business Process Reengineering, Technology, and Educational practices at various companies. Many of his practices were cited for excellence. His practices and contract awards realized over 25 Million dollars in revenues. His various roles included Vice-President, Chief Academic Officer (CAO), and Chief Technology Officer (CTO); he is currently Vice-President and Dean of the School of Science, Technology, Engineering and Math at APUS.

He facilitated various management and Joint Application Design (JAD) workshops. He is a certified F.A.S.T. Facilitator and a certified Project Management Professional (PMP). He is also an excellent instructor and uses humor effectively to communicate the principles of developing Information Technology and Management solutions.