Over twenty years ago, in his treatise on the pedagogy of cases, Lee Shulman, the former president of the Carnegie Foundation for the Advancement of Teaching, noted that “in all forms of professional education there lurks an overarching goal: to teach the neophyte ‘to think like’ a member of the profession.” Shulman describes this developmental process as extending beyond the usual skills and knowledge that constitute the professional curriculum, pertaining to habits of mind that are more metacognitive than cognitive (Shulman 1992). Indeed, in the past two decades we have continued to examine, unpack, and reconfigure curricula, traditional pedagogies, and modes of assessment to engage our students in cognitive apprenticeships that foster disciplinary or professional thinking. Yet, now we are at a crossroads where interdisciplinarity and integrative thinking is necessary to navigate the ecology of the professions.

This presentation considers the tension between outcomes-focused, multimodal pathways navigated by today’s learners and the reflective habits of mind that are cultivated through practices that apply folio thinking (Blacklund et al. 2001) to novel situations. As institutions consider whether and how we are preparing our students for careers that increasingly depend upon the integration of knowledge domains, how do we as a society cultivate learning cultures that transcend the constraints of curricular structures and value uncertainty as a crucial component of learning?

This session will explore how ePortfolios can foster successful collaborative learning communities from a crucial starting point: ‘thinking about thinking,’ to enhance learning through reflection and analysis of the inquiry process. Through an interactive session, participants will consider what cognitive processes or habits of mind are requisite for their disciplines and what bottlenecks students might experience in understanding these processes. We will then examine a successful group assessment project that scaffolds the process of inquiry through a progressive ePortfolio approach. The approach validates uncertainty as a crucial component of learning. The model combines the theoretical underpinnings from Baxter-Magolda (self-authorship); Middendorf and colleagues (decoding the disciplines); and Chinn & Malhotra (epistemologically authentic inquiry). The dialogue and discussions I hope to encourage are particularly timely given the seeming urgency of the pursuit of certifications through MOOCs, at the risk of undermining the experiential necessity for deep and meaningful learning.
Kathy M. Takayama

Dr. Kathy Takayama is the Executive Director of the Sheridan Center for Teaching and Learning and Professor of Molecular Biology, Cell Biology & Biochemistry at Brown University. She studied with the Nobel Laureate Phillip Sharp at MIT where she completed her B.S in Biology, and received her Ph.D. in Biochemistry & Molecular Biology from UMDNJ – Robert Wood Johnson Medical School (Rutgers Medical School).

She was a National Institutes of Health Postdoctoral Fellow at the University of Wisconsin-Madison, and a faculty member at the University of New South Wales in Sydney, Australia. Dr. Takayama was selected as a Carnegie Scholar in 2003 by the Carnegie Foundation for the Advancement of Teaching and Learning, and has since been extensively engaged in the scholarship of teaching and learning nationally and internationally.

Her current research extends across a broad spectrum, including ePortfolios and online learning; visualizations in learning; STEM (science, technology, engineering and mathematics) education; and higher education assessment and professional development. She has delivered numerous keynotes on her work and serves as an International Advisor to the Board for Ireland's National Forum for the Enhancement of Teaching and Learning in Higher Education. She has also advised higher education institutions throughout the US and in Europe, Singapore, Japan, Hong Kong, Latin America, and Africa. In 2002, she led the first multidisciplinary, international (pre-MOOC) online inquiry course in genomics for students across 24 universities in 11 countries to celebrate the sequencing of the human genome, titled Visualizing the Science of Genomics.

Dr. Takayama was elected President of the International Society for the Scholarship of Teaching and Learning (ISSOTL) in 2014. Her national and international teaching awards include the Australian Society for Microbiology David White Award for Excellence in Teaching, the Australian College of Educators Teaching Award, and the University of New South Wales Vice Chancellor's Award for Teaching Excellence. Dr. Takayama serves on the National Steering Committee of the National Science Foundation Biology Scholars Program, which she co-founded in 2005. In 2008, she was named National Academies Education Fellow in the Life Sciences by the National Research Council. She has served on numerous editorial boards, including the International Journal of the Scholarship of Teaching and Learning and the Journal of Microbiology and Biology Education.

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