Dis/Ability in the Physics Learning and Research Communities[1]

JACQUELYN CHINI, University of Central Florida — We conduct research on the accessibility of the physics learning and research communities. In one project, we explored enactment of checkpoints from the Universal Design for Learning framework, which supports instructors in preparing for variation across learners. The physics curricula we analyzed enacted practices that fostered collaboration and community and supported planning and strategy development; however, they did not enact practices from many checkpoints, specifically with regards to providing multiple means of engagement. We found similar need for improvement in chemistry curricula. We argue this points to a need in our community for professional development around supporting learners with diverse needs, abilities, and interests as well as resources to support collaboration between discipline-based curriculum developers and disability/accessibility experts. Towards this goal, we developed an Ability Profile toy model to support instructors and curriculum developers in planning for learner variation. Based on literature from disability studies, education, medicine, social science, psychology, technology, and governmental organizations, we identified six salient dimensions of ability for STEM instruction: physical, health, cognitive, visual, hearing and emotional-behavioral. We argue that instructors and curriculum developers should be cognizant of the load their curricular activities place on each dimension and provide options and variation. Finally, we are beginning a project aimed at measuring and improving physicists' knowledge and attitudes about dis/ability and the malleability of the impact of impairment on a successful physics career.

Jacquelyn Chini
University of Central Florida

Date submitted: 01 May 2019   Electronic form version 1.4