Guadalupe I Lozano* (guada@math.arizona.edu). Focus and coherence at the high school level: what they mean, and how to strive for them in the context of specific function and statistics tasks. Preliminary report.

The CCSSM stemmed, in part, from a vision of coherence and focus for K-12 education in the US. Coherence, the purposeful evolution from particulars to more general structural essentials, and focus, an emphasis on depth over width of curricular content, suggest two different guiding principles in the K-8 standards.

At the high school level, however, the dimensions of focus and coherence seem to overlap. In grades 9-12, we gain depth and loose curricular ‘width’ (we ‘focus’) by elucidating conceptual connections that cause previously disconnected ideas to coalesce into one. The Pythagorean identity and the distance formula, for example, may be thought of as conceptually identical, yet are often remembered as disconnected knowledge pieces. From this perspective, coherence at the high school level is achieved through focus, and focus, through coherence.

In this talk, I illustrate how the standards’ focus and coherence dimensions may be purposefully thought about (and practically leveraged) in each of several high school level tasks from the function and statistics domains. The presentation borrows from materials I developed for teacher PD sessions on CCSSM Focus, and aims to generate discussion about the interplay between focus and coherence in the high school grade band. (Received September 16, 2014)