Sayonita Ghosh Hajra* (sayonita.ghoshhajra@csus.edu) and Yajenny Pacheco Enamorado (yajennypatricia@csus.edu). Examining area of a rectangular region with area-unit comparison. Preliminary report.

In this talk, we will share the data contrasting responses of four pre-service teachers (PTs) to problems that were part of an ongoing study of PTs’ conceptions of area of a rectangle at a public university in the United States. We asked PTs to find the areas of the two rectangular regions with specific dimensions, one with whole number dimensions and other with fractional dimensions, using 3” by 5”-index cards. In the other tasks, we asked them to respond to some imaginary child’s confusion on finding the area of a rectangular region. We will discuss various strategies, including covering, area formula, comparison of quantities using arithmetic operations, such as multiplication and division, that PTs used to solve the tasks. We will discuss the commonalities of PTs’ struggles on specific parts of the tasks and the specific questions raised by the researcher to guide the PTs in making sense of their thinking on understanding of the area concept. (Received September 08, 2019)