1035-L1-1970 **Ian Whitacre*** (iwhitacr@rohan.sdsu.edu), San Diego State University, Dept. of Mathematics and Statistics, 5500 Campanile Drive, San Diego, CA 92182-7720, and **Susan D. Nickerson** (snickers@sciences.sdsu.edu), San Diego State University, Dept. of Mathematics and Statistics, 5500 Campanile Drive, San Diego, CA 92182-7720. *Providing Support for Pre-service Teachers' Development of Mental Computation Strategies.*

We will describe a classroom teaching experiment in a mathematics course for pre-service elementary teachers focused on Number & Operations. The course was designed to foster students' development of number sense by encouraging students to develop their own meaningful mental computation strategies. We will briefly describe the pedagogy and results of our research.

The class was organized around investigating problems, usually in small groups. Throughout the course, the instructor looked to capitalize on opportunities in the existing curriculum for authentic mental math activity. In whole-class discussions, students engaged in reflective discourse, which included explanation and justification of a student's shared method. Students negotiated how to symbolize the shared strategy, and engaged in collective reflection on significant features of the specific problem that may have lent themselves to the particular method.

Our data included transcripts of clinical interviews with 13 students, students' relevant written work, and an adapted version of the Number Sense Rating Scale. Results show that at courses' end students used a greater variety of mental computation strategies and that their understanding of the operations became less tied to the standard algorithms. (Received September 21, 2007)