Winter 2016 Teaching Skills Study Award (TSSA) Report

Name: Min-Lin Lo
Department: Mathematics
Email address: mlo@csusb.edu

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Name and Date of conference attended: AMS-MAA Joint Mathematics Meetings January 6-9, 2016

Teaching Skill(s) Studied:

Strategies (including using humor) that enhance teaching and learning mathematics. Developing mathematical thinking and problem solving skills through games, IBL, and flipped classroom. Innovative and effective ways to teach assorted math topics. Making connection between math concepts using real life objects and applications of math.

Impact on Current Teaching (How was this info applied)?

I learned several new hands-on activities and structure and how they are applied in the presenters’ class. I adapted the following to use in my classes, in particular:

1. In MATH 251 (Vector Calculus)-Using dynamic visualizations and animations, created using Geogebra and other math software to improve the students understanding of difficult concept and multi-dimension concepts.

2. In MATH 262 (Applied Statistics)-Tailoring statistics assignments to students’ interests. E.g., a data collection and analysis project that requires students to think through an entire experiment from choosing a question to drawing conclusion. I designed 5 projects that use the real data student groups collected in the beginning of the quarter to solve problems on concepts they learned throughout the quarter. A bonus credit project on analyzing CA lottery scratchers games’ expected value.

3. In all classes: Use inquiry-based learning approach when appropriate.