An Examination of Physics Student Participation in an Online Group Homework Forum  
BRANDON KAWATA, JIM KISIEL, California State University Long Beach — Koondis is an online group homework tool developed by CSULB Physics faculty to supplement large lecture classes by encouraging student-student engagement and physics discussion outside of the lecture by assigning groups of 6-7 students to solve specific physics problems. Koondis discussions from Physics 151 and Physics 152 (calculus-based Mechanics and Electricity & Magnetism, respectively) in Fall 2013 were analyzed by examining the content of posts made in these discussions from September and November. Koondis was used in Physics 151 for students to discuss homework problems while in Physics 152, the tool was used for external ill-defined problems. It was found that in both classes students were talking about physics but in a procedural manner to solve the problem rather than to discuss physics concepts. Considerable changes in posting behavior were observed in both classes. An increase in “Assignment-related” and “Affirming” posts were observed in Physics 151 while a decrease in “Physics” posts and an increase in “Solution” and “Math” posts were observed in Physics 152. It seems that the instructor’s intended purpose of the tool, the nature of the problems being examined, as well as extrinsic motivation (grades) can be influential on how students utilize Koondis.

Brandon Kawata  
California State University Long Beach

Date submitted: 12 Oct 2015
Electronic form version 1.4