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Tim P Fukawa-Connelly* (tim.fc@unh.edu), Kingsbury Hall W348, Department of Mathematics and Statistics, University of New Hampshire, Durham, NH 03824. *Modeling Mathematical Behaviors; Making Sense of Traditional Teachers of Advanced Mathematics Courses Pedagogical Moves.*

This study investigates proof writing strategy within a traditionally taught abstract algebra classroom. Drawing on Rasmussen and Marrongelle's (2006) construct of Pedagogical Content Tools (PCTs) I expand the domain of analysis to include traditional instruction, and increase the number of PCTs under consideration. I describe how the instructor modeled behaviors that are important in learning advanced mathematics and characterize this a broad category of PCTs called Modeling Mathematical Behavior. Proof-writing was one of the most important of the classroom activities that I observed. During proof discussions, the instructor made significant use of questions, both directed at students and rhetorical. These questions, along with her statements, modeled strategies that students could use to help develop their proof-writing skills. While students were not observed to have adopted any of the modeled behaviors, I believe that these teaching techniques hold promise for changing instruction and improving student learning. (Received September 21, 2010)