Abstract Submitted for the MAR13 Meeting of The American Physical Society

The Use of Research-Based Instructional Strategies in Introductory Physics: Where do Faculty Leave the Innovation-Decision Process?¹ CHARLES HENDERSON, Western Michigan University, MELISSA DANCY, University of Colorado Boulder, MAGDALENA NIEWIADOMSKA-BUGAJ, Western Michigan University — During the Fall of 2008 a web survey was completed by a representative sample of 722 United States physics faculty. In this talk we will briefly present summary statistics to describe faculty knowledge about and use of 24 specific research-based instructional strategies (RBIS). We will then analyze the results based on a four stage model of the innovation-decision process: knowledge, trial, continuation, and high use. The largest losses occur at the continuation stage, with approximately 1/3 of faculty discontinuing use of all RBIS after trying one or more of these strategies. These results suggest that common dissemination strategies are good at creating knowledge about RBIS and motivation to try a RBIS, but more work is needed to support faculty during implementation and continued use of RBIS. Based on a logistic regression analysis, only nine of the 20 potential predictor variables measured were statistically significant when controlling for other variables. Faculty age, institutional type, and percentage of job related to teaching were not found to be correlated with knowledge or use at any stage. High research productivity and large class sizes were not found to be barriers to use of at least some RBIS.

¹Supported by NSF #0715698.

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Date submitted: 06 Nov 2012 Electronic form version 1.4