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Estrella Johnson*, strej@vt.edu, and **Naneh Apkarian**. *Evaluating the Uptake of Research-Based Instructional Strategies in Undergraduate Chemistry, Mathematics, and Physics*. Preliminary report.

Research-based instructional strategies (RBIS) are instructional strategies which have demonstrated the potential to improve student engagement and interest in learning. For years there have been calls to implement RBIS in postsecondary STEM courses, but uptake has been limited. This project will investigate the usage levels of RBIS by those teaching introductory undergraduate chemistry, physics, and mathematics courses - courses which are common requirements for those pursuing postsecondary degrees in STEM fields. In addition to uncovering patterns of specific RBIS usage in and across the disciplines, we will test several conjectures related to the reasons why these instructors do or do not use RBIS in their classrooms. These conjectures include the impact of individual experiences, department context, institutional context, and discipline. By investigating patterns of and factors associated with the use of RBIS in general chemistry, single-variable calculus, and quantitative-based physics, we will contribute to the ongoing efforts to increase the implementation of RBIS in undergraduate STEM courses. (Received September 25, 2018)