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Dianna J. Spence*, North Georgia College & State University, Dep't. of Mathematics and Computer Science, Dahlonega, GA 30597, and **Sherry L. Hix**, North Georgia College & State University. *Leveraging Features of Online Homework and Measuring Student Performance.*

Several features and types of assignments are available in the Portal online homework systems (e.g., StatsPortal, CalcPortal). These include algorithmic questions, question pools, and “Learning Curve” activities linked with assigned reading passages. There are also many ways to use online homework, by varying the weight of assignments in determination of grades (low to high stakes), and by varying assignment configurations, such as time limits, number of retries allowed, and question delivery. We describe several implementations and note the role and advantages of each. We then share results of research conducted in which student performance on online assignments was investigated and compared in two different implementations of a course. In both groups, student performance on online assignments was compared to that of traditional written assignments. Performance trends were also compared between the beginning of the course and the end of the course. Students’ relative performance on online assignments showed significant gain by the end of the course. Performance on both types of assignments and in the course overall was investigated as a possible function of computer self-efficacy, self-efficacy for self-regulated learning, and mathematics self-efficacy. (Received September 24, 2012)