A year long study was conducted in multiple sections of College Algebra by two professors using both traditional paper homework assignments and an online homework system. The online homework system was Pearson/Addison-Wesley’s CourseCompass which was integrated with our textbook. This system allows the students multiple attempts at problems with extensive hints and examples while providing instant feedback for every problem. Data was collected from both groups including in-class exam scores, final exam scores, and homework averages. Of particular interest to the investigators was whether one method would help facilitate the understanding and retention of the material better than the other. We will present the analysis of our findings and the conclusions we have drawn. (Received August 28, 2008)