In recent years many colleges and universities have been shifting their calculus classes from small size (30-35 students) to large lecture format (more than 150 students). As a result of the change many issues have resurfaced that have diluted the pedagogical influence of teaching first year calculus. Among those issues are the lack of student engagement, the lack of interaction between students and their instructors, and the need for students to find better study strategies. Many instructors are now, more than ever before, interested in learning how to incorporate instructional technologies to help improve the teaching and learning experiences in these courses. In this talk we will share with you how we have tackled these issues using three different technological resources aimed at improving in-class participation, enhancing the student-teacher interaction, as well as helping students organize their study materials. We will also present the details of an ongoing research study designed to assess the effects of these approaches on students’ perceptions and achievement. (Received September 21, 2010)