We discuss an assessment of the implementation of the flipped pedagogy in the Introductory Statistics course offered by a mathematics department. The study is based on the comparison of five flipped sections (n=122, over three semesters) and five traditional sections (n=130, over three semesters). We analyze the acquisition of statistical knowledge and the evolution of students’ attitudes toward statistics between the two groups. In a preliminary analysis of the data, we found that the flipped pedagogy did not generate statistically significantly different scores in the instruments used to assess statistical knowledge (basic statistics knowledge questionnaire, final exams scores, WebAssign homework scores). We also found that the flipped pedagogy did generate statistically significantly better scores in the affect and cognitive competence of the students, as measured by the pre-test and post-test answers to the Survey of Attitudes Toward Statistics (SATS-36) of Professor Schau. We also provide details about the instructional methods used to implement the flipped pedagogy during the semester. The presentation is based on joint work with Elizabeth Lamprecht (Adrian College) and Roy St.Laurent (Northern Arizona University). (Received September 19, 2017)