The issue of attrition in online courses at higher learning institutions remains a high priority in the United States. A recent rapid growth of online courses at community colleges has been instigated by student demand, as they meet the time constraints many nontraditional community college students have as a result of the need to work and care for dependents. Failure in an online course can cause students to become frustrated with the college experience, to become financially burdened, or to even cause them give up and leave college. Attrition could be avoided by proper guidance of who is best suited for online courses. This study examined factors related to retention (i.e., course completion) and success (i.e., receiving a C or better) in an online biology course at a community college in the Midwest by operationalizing student characteristics (age, race, gender), student skills (whether or not the student met the criteria to be placed in an AFP course), and external factors (Pell recipient, full/part time status, first term) from the persistence model developed by Rovai. Internal factors from this model were not included in this study. Both univariate analyses and multivariate logistic regression were used to analyze the variables.

Results suggest that race and Pell recipient were both predictive of course completion on univariate analyses. However, multivariate analyses showed that age, race, academic load and first term were predictive of completion and Pell recipient was
no longer predictive. The univariate results for the grade of C or better showed that age, race, Pell recipient, academic load, and meeting AFP criteria were predictive of success. Multivariate analyses showed that only age, race, and Pell recipient were significant predictors of success. Both regression models explained very little (<15%) of the variability within the outcome variables of retention and success. Therefore, although significant predictors were identified for course completion and retention, there are still many factors that remain unaccounted for in both regression models. Further research into the operationalization of Rovai’s model, including internal factors, to predict completion and success is necessary.