

Ashby, J. (2010). The impact of learning environment on student success in developmental math (Doctoral dissertation, Towson University, 2010).

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Dissertation Abstract

Increasing enrollments in community colleges has led to an increase in distance education courses. The developmental coursework necessary for many community college students is being offered both in online and hybrid environments. These students face challenges with the content and now find themselves needing to learn in a virtual classroom. Current research (Chernish, DeFranco, Lindner, & Dooley, 2005; Frederickson, Reed, & Clifford, 2005; Herman & Banister, 2007; Kromrey & Purdom, 1995; Scheetz & Guntner, 2004) shows that there is no difference in student success based on the learning environment, but this was completed primarily with upper-class and graduate students. This study investigated student success in a developmental math course taught in the face-to-face, hybrid, and online environments at a mid-Atlantic community college. Cognitive Load Theory was used during the design of the course and its principles were maintained in all of the learning environments. The sample was 167 students with an average age of 25 years, 58% were female, 49% were Caucasian and 43% were African-American.

The focus was on student success, but the impact attrition had on the results of the study is discussed. The study also investigated student characteristics and their relationship to success. Age, gender, race, student status, placement scores, financial aid, learning style, locus of control, and technology skills are all compared between successful and unsuccessful students to determine if specific traits were more beneficial within a particular environment.