Assessing the Impact of Effort and Learner-Content Interaction on Student Outcomes

for Campus and Online Students

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This research examines the impact of course design and student effort on student outcomes, specifically, the impact of student effort and learner-content interaction course features on student learning, engagement, and satisfaction, for both campus-based and online course sections of a corporate finance course. Based on strategies to promote learner-content interaction in a quantitative course setting, individual assignments and interactive study modules have been implemented in both the campus-based and online sections of the course. Additionally, student discussions are required in the online course sections. The assignments and interactive study modules are examples of learner-content interaction course features while discussions represent learner-content interaction as well as learner-learner and learner-instructor forms of interaction. Measures of student effort, learner-content interaction, student engagement, student satisfaction, as well as direct and indirect measures of student learning were collected for both online and campus-based sections. The results suggest that learner-content interaction has a positive impact on student learning, engagement, and satisfaction, while student effort measured as amount of time was either negatively associated or not associated with these student outcomes. Further analysis revealed an interaction effect between student effort and performance expectancy on student learning. The differences in results between online and campus-based students are explored.

Significant research has been conducted on how college affects students (Astin, 1993; Pascarella & Terenzini, 2005). Several studies link student outcomes of learning, persistence, engagement, and satisfaction (Carnini, Kuh, & Klein, 2006; Kuh, Kinzie, Buckley, Bridges & Hayek, 2006; Tinto, 1993). Research on what activities promote engagement and interaction span both campus and online students (Chickering and Ehrmann, 1996; Moore, 1989; Tinto, 1993). The online quality assurance movement has resulted in significant consideration of the types of student interactions that foster positive student outcomes. Three types of interaction have been identified: learner-instructor, learner-learner, and learner-content (Anderson, 2003; Miyazoe & Anderson, 2010; Moore, 1989). Of the three, learner-content interaction has been most consistently associated with student learning. Measures of learner-content interaction have often included amount of time with content (Murray, Perez, Geist & Hedrick, 2013; Zimmerman, 2012) and types of learner-content interaction (Thurmond & Wambach, 2004).

Applying these previous findings, hypotheses are developed that connect measures of student effort and learner-content interaction with student learning, engagement, and satisfaction. Further, hypotheses are developed that compare connections of student effort, learning, engagement and satisfaction between online and campus-based students. Measurements of learner-content interaction are structured as “success with” learner-content activities, rather than “time with” or “type of” learner-content interaction measurements. A separate measurement of time expended is used to represent student effort. Measures of student engagement for online students (Dixson 2010) are adapted and used with both the online and campus students.

Results from two campus-based and two online sections of a business finance course are used to test these expected impact of student effort and learner-content interaction on student learning, engagement, and satisfaction. The results suggest course design matters. Learner-content activities have a bigger impact on learning, when controlling for incoming variable of GPA, than any other variable. The results of the study provide evidence of the importance of learner-content interaction on direct measures of student learning for both online and campus students, but unanticipated negative association of student effort with student learning for campus students. Further analysis reveals an interaction effect of student performance expectancy with student effort for campus students. The results of the study also support the anticipated relationships between learner-content interaction and student engagement and satisfaction, but little association between student effort and student satisfaction. When comparing campus to online students, the study suggests higher levels of effort by online students, but minimal differences in learner-content interaction, engagement, or satisfaction. Based on these results, the author provides suggestions on how to maximize the positive outcomes associated with learner-content interaction for both campus and online students while addressing the complicated association between student effort and outcomes.

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