ABSTRACT

Title of Document: USING ANALYTICS TO ENCOURAGE STUDENT RESPONSIBILITY FOR LEARNING AND IDENTIFY COURSE DESIGNS THAT HELP.

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The purpose of this study is to demonstrate how instructional technology impacts teaching and learning. Specifically, in this study I show how learning analytics could be implemented to encourage student responsibility for learning and identify effective faculty course designs that help. Typically, learning analytics focuses on data mining student use of an online learning management system (LMS), the most widely used instructional technology in higher education. However, key challenges include a relative lack of empirical studies, the field's predisposition toward prediction vs. intervention, and a lack of understanding about the role of faculty LMS course design on student usage. Accordingly, I explore how system-generated feedback to students about their LMS use compared to peers can serve as a metacognitive "nudge" toward improved responsibility for learning and academic performance. I also explore how this approach might shine light on effective faculty

LMS course designs. I show how analytics provides both a theoretical and methodological foundation for implementing interventions based on the learning sciences, including self-efficacy, self-regulated learning and instructional technology. Finally, my findings contribute to the dialogue about scalable institutional approaches to improving student retention, persistence and success. Learning analytics is made possible through the technology of data mining, but I believe it also serves as a mirror to reflect (if not assess) the impact of instructional technology on teaching and learning.