The HumAn Learning Project: Humanities, Analytics, & Learning in a Multi-Section General-Education Course, Phase 2

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Year/Semester Awarded: Spring 2016
Number of undergraduate students who were subjects of your study: ~8000
Number of graduate students who were implicated in your study: ~40

Executive Summary
The HumAn Learning Project (Humanities, Analytics, & Learning in a Multi-Section General-Education Course) uses learning analytics to triangulate on student success in a multi-section, general education course. Phase 1 of the project, completed in 2015, uncovered important demographic trends in success among the 800-1000 students and 9-10 AIs involved per year. Phase 2, completed in Fall 2016, (1) refined our understanding of these trends with multivariate modeling, (2) compared them to markers of student success in similar IU general education courses, (3) assessed variability of student success across sections of the target course, (4) analyzed student performance over time, and (5) developed and piloted an intervention, based on Phase 1 findings, that is designed to use anthropological theories to close demographic gaps in student success rates. Using institutional demographic and registration data along with class-based student performance data, we make several findings that may be significant for impacting larger campus trends and practices. First, because of their size, large general education courses may mirror larger campus achievement trends. We documented that gaps in GPA based on race, gender, and generational status in our course are similar to those in other general education courses on campus. Second, using resources from our field of expertise, we theorized and designed a discipline-based intervention: the Cultures of College. Third, the HumAn Learning Project models a discipline-based response to institutionally derived analytics that keeps the faculty’s focus on learning. Fourth, ongoing during Fall 2016, we are piloting the Cultures of College intervention as a way to disrupt demographic-based performance trends.

Narrative
The HumAn Learning Project uses learning analytics to defamiliarize a multi-section freshman course on ethnography in order to triangulate on the student experience and revise the course for greater learning opportunities. All big courses represent significant investments by the sponsoring departments, their schools, the graduate-student section leaders, and the undergraduate students who hope they auger a successful college career. This project investigates student performance indicators in a single course in order to theorize and test learning interventions that improve success. The target course, Anthropology A122 Interpersonal Communication, enrolls 800-1000 students per year, taught in small sections by 10 graduate-student instructors per year, supervised by a faculty course director. Phase 1 of the research project, completed in Fall 2015, identified demographic variations in learning gaps in the course. Phase 2 of the research, completed in Fall 2016, established that these trends are also found in other, similar general-education courses on campus. Phase 2 further set out to theorize, design, and test course-based and anthropological interventions to improve learning trends.
Initial Findings
To date, the most significant findings of Phase 2 of the study include the following. First, because of their size, large general education courses may mirror larger campus achievement trends. We documented that gaps in GPA based on race, gender, and generational status in our course are similar to those in other general education courses on campus. Second, using resources from our field of expertise, we theorized and designed a discipline-based intervention: the Cultures of College. Third, the HumAn Learning Project models a discipline-based response to institutionally derived analytics that keeps the faculty’s focus on learning. Fourth, ongoing during Fall 2016, we are piloting the Cultures of College intervention as a way to disrupt demographic-based performance trends. Initial findings from the intervention include promising signs that course-based notions of culture (especially as socially constructed, learned, and contextual) can affect student performance and sense of belonging in the academic Culture of College.

Contingent on further funding, we will be able to analyze, refine, and extend testing of the (1) efficacy, (2) impact, and (3) transferability of the Cultures of College intervention.

Reflection about the Process
I was fortunate to have research assistance from Maithreyi Gopalan, a talented graduate student in SPEA, during this phase of the study. With her assistance, I was able to (1) refine our understanding of these trends with multivariate modeling, (2) compare them to markers of student success in similar IU general education courses, (3) assess variability of student success across sections of the target course, (4) analyze student performance over time, and (5) develop and pilot a class-based intervention. I found this to be a step-wise process that required planning and scheduling to accommodate several sequences of data collection and analysis. Although still slow-going, accessing and working with the student learning analytical data was more prompt and less fiddly than last year. We didn’t receive initial data until April or May, but we had built in such time, so there was little if any slowdown during the first half of the grant year.

Initially, our finding that the target course recapitulates campus-wide trends seemed to negate the care that goes into course design and teaching. However, this mirroring effect has emerged as one of the most powerful and important features of the study, as we seek ways to disrupt sturdy campus trends that manifest in one course. The driving question is: What structural or academic changes can enable students to reorder themselves? An additional important challenge is to develop transferrable or spreadable interventions that can be used across campus. Moreover, this project continues clarify the challenge of a productive and ethical interface between institutionally-derived learning analytics and faculty-based disciplinary learning. Such theorizing, along with testing of practical responses, becomes more clear with experience.

Changes Undertaken, Connections to the Field, and Disseminating the Findings
Changes already undertaken in the target course include the following.

First, we carried out a short instructor-led intervention that essentially had two components. First, instructors were asked to reinforce some of the most common techniques used in college by successful students such as forming study groups, going to the campus writing center, and attending office hours using a standardized template during the first day of class.
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Completion Report

Most instructors include such advice in passing in their syllabus. However, research has shown that students’ academic behaviors such as the ones included in the standardized template contribute significantly to their success in college (Yeager et al., 2016). We wanted to explore if such instructor-led reinforcement influences students’ academic behaviors and hence student outcomes. Second, all students were asked to participate in a short survey that measures such academic behaviors (see appendix for survey).

We found that the response rates for the surveys were low (38 percent). However, we found that students’ self-reports of positive academic behaviors among the survey participants was extremely low. For example, the majority of respondents stated that they had never attended office hours and never visited the academic writing center even though several assessments in this course is based on writing assignments. Unfortunately, we are not able to track the survey responses to student-level course performance because the survey was anonymous. However, we plan to refine the intervention and survey protocols in Phase 3 of the project if we receive funding. We plan to analyze the associations between students’ self-reported academic behaviors and their end of course performance to explore possible linkages between these academic behaviors and student success. We also plan refine this intervention by integrating the instructor-led intervention further within the course content in the subsequent semester. We believe that if the intervention was seen as an integral part of the course content, an attitude that is being tracked for the first time this fall, students might be encouraged to pursue those academic behaviors that improve their college outcomes. Moreover, we plan to shift the timing of the survey later in the course, after student receive their first major grades in this and other courses so that they have a sense of their performance relative to their expectations for it.

Second, since A122 is new to the Anthropology Department since fall 2015 (moving from the Department of Communication and Culture), we have added data that allow us to track the declared majors of students who take the course. Additionally, in class instructors are actively connecting the course to opportunities and next courses associated with the Anthropology Department.

Connections between existing and emerging work and this study includes the following. This effort toward bringing the human element to “big data” represents an important emerging development of how learning analytics can be used and will propose ethical and efficacious uses in the future throughout academia. Moreover, at the faculty level, this study models a significant point of entry for a conversation about teaching and learning on campus that triangulates on what is, rather than mainly what instructors might hope or believe based on exceptionalism, affective attachments, and generic pedagogic predictors. In addition, this study has been a foundational part of a proposal submitted to the Emerging Area of Research grant competition at IU (PI is Katy Borner). Finally, this work complements ongoing study of graduate student learning about college teaching (see Robinson’s SOTL grants with Professors Valerie O’Loughlin and Catherine Sherwood-Laughlin).

Plans to further this work include, first, continued monitoring of institutional data, such as withdrawals, retention rates to second semester and sophomore year, 4- and 5-year graduation rates, and declared major. Second, we will refine and apply the Cultures of College intervention. Finally, in Phase 3 (with additional funding), we will continue to test and advance the theory of an integrative, humanistically-informed, disciplinarily sound use of learning analytics by seeking collaborations among instructors across campus and beyond. The goals will be to disseminate
successful interventions that are transferable or spreadable to other multi-section courses and to spark more research.

Dissemination of the initial study findings is already underway on campus and at professional conferences and will continue in similar venues:


Scholarly articles are in draft form and expected to be submitted during Spring 2017.

Bibliography


See Appendix for data analysis.