

## Stalled at the Gate: Addressing Student Failure in a “Gateway” Course

Several years ago, as I looked out across the classroom of students taking their seats for the first day of American Civilization (HIST 1700), I noticed some familiar faces. They’d been here before. Having failed the course they were back for another crack at earning the credits needed to graduate or transfer. American Civilization fulfilled humanities requirements for the associate’s degree at the College of Eastern Utah where I taught at the time.<sup>1</sup> But, more critically, HIST 1700 was one of only two courses regularly taught at the college that provided students with state-mandated American Institutions credits. Like math and English composition, HIST 1700 is a “gateway” course and that is why nearly all students seeking a degree at CEU landed in my classrooms. Every semester many students successfully completed the course. But quite a few failed or withdrew. Twenty-six percent of the students who enrolled in the course ended up stalled at the gate, forced to repeat the class (or try their luck in another AMI course). This essay describes my effort to diagnose why so many students were not succeeding in HIST 1700 and to devise ways of getting more of them through the gateway.

Higher education is increasingly data-driven. Institutions now collect and use vast amounts of data about student characteristics and behavior to manage recruiting and enrollment, schedule facilities and human resources, organize degree and course offerings, and track student completion. Until recently such data has been utilized largely to guide institutional or program-level decisions. For example, the Center for Community College Student Engagement’s massive data sets, drawn from tens of thousands of students across the country, have been used by a number of institutions to implement a variety of student engagement and retention programs, including accelerated and self-paced developmental courses, first-year experiences and learning communities, and structured academic pathways. Utilizing student data at the classroom-level to design and teach individual courses is not yet a common practice although that is beginning to change with projects such as the Civitas Explore platform and Instructure’s Student Insight Engine, both of which are now being piloted at USU.<sup>2</sup> In trying to understand the failure-to-complete problem in HIST 1700, I had access to very limited data. But the data I did have was central to gaining insight into student performance and to imagining new pedagogical strategies for success.

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<sup>1</sup> Utah State University merged with the College of Eastern Utah in July 2010 to form

<sup>2</sup> On the emerging field of learning analytics, see Courtney Stewart, “Learning Analytics: Shifting from Theory to Practice,” *Journal on Empowering Teaching Excellence* 1 (March 2017).

Failure-to-complete rates in “gateway” courses are a serious concern in open enrollment institutions like the former College of Eastern Utah where many students arrive with low college readiness skills.<sup>3</sup> In 2010, 22% of all grades at CEU were “D”s or “F”s. At Utah State University only 12% of grades in undergraduate courses fell in this range. Remediation, as most higher education scholars agree, can be problematic. It is expensive for institutions to provide college preparatory courses and for students as well, who find themselves forced to spend time and money on classes that do not produce credits toward graduation. The problem was particularly pronounced at CEU because high D-F rates in courses such as MATH 1030 (42%), ENGL 1010 (22%), and HIST 1700 (26%) contrasted sharply with exceedingly high grades in almost all other courses. In 17% of the courses offered at CEU from 2008-2010, *all* students received a grade of “A”; in 42% of the courses more than half of the final grades were “A”s.<sup>4</sup> The impact on student expectations and satisfaction of this disparity between grades in must-complete “gateway” courses and in other classes is unknown, but at an institution facing a dramatic decline in enrollment, as CEU was in 2010, a serious look at grade distribution and, especially, at failure-to-complete rates, seemed warranted.

It was in this context that I set out to determine why so many students were not succeeding in HIST 1700. At my request, the CEU administration provided data on the 495 students who had taken the sections of HIST 1700 I taught between spring semester 2008 and spring 2010. The data provided included overall grade point average for each student at the time they took HIST 1700, their ACT scores (if available<sup>5</sup>), and their grades in ENGL 1010 and whichever math course they had taken. From my own course grade books I compiled assignment completion rates and assessment scores for each student as they progressed through the sixteen-week course. In addition to examining this data, I conducted CLOZE reading tests in the spring 2010 sections of the course (82 students took the test) and ran a Flesch-Kincaid analysis on 148 student essays.

Although I had no data on the age, race, class or ethnicity of the students enrolled in HIST 1700, casual observation suggested that they were representative of CEU’s student body, which was (and is still today) overwhelmingly white and young. Eighty-two percent of CEU’s students enrolled at the Price campus were white.<sup>6</sup> Unlike many open enrollment community colleges, CEU enrolled mostly traditional

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<sup>3</sup> USU Eastern remains an open enrollment institution offering mostly associate’s degrees and technical certificates, although bachelor’s and master’s degrees available through the USU regional campus system.

<sup>4</sup> By contrast, in only 1% of the undergraduate courses offered at USU were all grades “A.”

<sup>5</sup> As an open enrollment institution, CEU did not at that time require students to submit ACT scores so not all students enrolled in HIST 1700 had taken the exam. Today all students in Utah are required to take either the ACT or SAT.

<sup>6</sup> The CEU campus in Blanding served a majority Native American population (57%), but those students took HIST 1700 offered by faculty on that campus.

age students. Seventy-five percent of CEU's students were under the age of 25 years old, with a significant number under the age of 18 years old admitted through Utah's concurrent enrollment program.<sup>7</sup> Seventeen percent of CEU's students were over the age of 30, which meant that each section of HIST 1700 had a few non-traditional students mixed in with a large group of very young students. Thirty-five percent of the students at CEU had Pell Grants, suggesting that a significant number of students in HIST 1700 came from economically distressed homes. Fifty-two percent of the students in HIST 1700 were women, a reflection of the fact that CEU was one of only two USHE institutions that enrolled more women than men.<sup>8</sup>

The students enrolled in HIST 1700 had basic college skill levels consistent with expectations at an open enrollment community college. The average ACT composite score for students at CEU in 2009 was 20, and this was true for the students in HIST 1700. The average reading score was 21. The ACT's 2009 College Readiness Benchmark score for predicting a 75% chance of earning a grade of "C" or higher in college social science courses was 21 on the reading test. Sixty-three percent of the students enrolled in HIST 1700 met or exceeded this benchmark. This would suggest a reasonable expectation that a significant number of students enrolled in HIST 1700 should have been able to pass, as, in fact, they did. But success in the course did not clearly correlate with ACT scores. Students who received "A"s in the course all had ACT scores at or above the readiness benchmark of 21. But some students whose ACT scores met the benchmark failed the class and others who did not meet the benchmark received "B"s and "C"s. Although ACT scores were not predictive of individual student success, I found it valuable to know that, in general, the students in my course had modest college-level skills, particularly in reading, and that a significant number (36%) fell well below what ACT identified as college ready, with reading scores ranging from 12 to 19.

This fact was supported by the CLOZE tests I administered to 82 students during the spring of 2010. The results of these tests indicated that the average reading level of students in HIST 1700 was the 8<sup>th</sup> grade, with a number of students scoring at the 6<sup>th</sup> grade level; no students scored above the 12<sup>th</sup> grade level. On the Flesch-Kincaid scale the written work submitted by students was also, on average, at the 8<sup>th</sup> grade level; only one essay reached the 12<sup>th</sup> grade level while 18 were written at or below the 6<sup>th</sup> grade level. The textbook used in the course was written at the 12<sup>th</sup> grade level on the Flesch-Kincaid scale, which is standard for commercial, college-level history textbooks. These results helped explain the anecdotal evidence I had from conversations with students and course evaluations that many students were struggling with the textbook. My experience through nearly twenty years of

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<sup>7</sup> Because Price's only high school is located just a block from the CEU campus, most concurrent enrollment students attended the same classes as regular enrollment college students. Twenty-one percent of students at CEU in 2010 were concurrent enrollment.

<sup>8</sup> System-wide, USHE institutions serve equal numbers of men and women; only CEU and Snow College enrolled more women in 2010 (59% and 54% respectively).

teaching the U. S. history survey is that students rarely “like” a textbook. But clearly the problem in HIST 1700 went beyond the usual student displeasure with assigned reading.

A disconnect between the textbook and student skill levels may have been one factor in the high failure rate in the course. But data on overall GPAs for the students in HIST 1700 and on their success rates in other “gateway” courses suggested that I needed to take a deeper look. The average college GPA for students at the time they took HIST 1700 was 2.68. A breakdown of GPAs clearly correlated with success in the course—those students who received an “A” in the course had, on average, much higher GPAs (3.5) than those who failed (average GPA of 1.7). Of the students who received failing grades in HIST 1700, 13% also failed ENGL 1010 and 29% failed MATH 1030 or MATH 1050.<sup>9</sup> All of this seemed to indicate there was a cohort of poorly performing students whose failure extended beyond the specific conditions or content of HIST 1700.

Did these failing students have any identifiable characteristics or behaviors that might help explain their failure to thrive? The data available to me limited any conclusions about class, age, or race beyond the broad ones mentioned above, but my course grade books revealed two important characteristics. First, a majority (55%) of the students who failed HIST 1700 were men. Conversely, women accounted for 60% of the “A” grades in the course. This seems consistent with recent scholarship on the declining success of men in college.<sup>10</sup>

The second distinguishing characteristic of those who failed HIST 1700 was the lack of what I call “work discipline.” Students who failed did so because they simply did not complete the required coursework. Students were required to complete a variety of tasks in the course, including a group project with a classroom presentation, short weekly research and writing projects, exams, and a final essay paper. There were a total of 22 graded activities divided across four course units. Students earning “A”s in the course consistently completed 98%-100% of the graded tasks during each unit. Students earning “F”s completed on average fewer than half the graded tasks, with the completion rate declining during each unit. Failing students completed 73% of the tasks during the first unit, but only 42%

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<sup>9</sup> It should be noted that not all students had completed a math or English course by the time they took HIST 1700.

<sup>10</sup> Mark Hugo Lopez and Ana Gonzalez-Barrera, “Women’s College Enrollment Gains Leave Men Behind,” Pew Research Center, FactTank: News in the Numbers (<http://www.pewresearch.org/fact-tank/2014/03/06/womens-college-enrollment-gains-leave-men-behind/>). Accessed July 15, 2017); Daniel Voyer and Susan D. Voyer, “Gender Differences in Scholastic Achievement: A Meta-Analysis,” *Psychological Bulletin* 140 (2014), 1174-1204; Nolan Feeney, “Women Are Now More Likely to Have College Degree Than Men,” *Time*, October 7, 2015; Tamar Lewin, “At Colleges, Women Are Leaving Men in the Dust,” *New York Times*, July 9, 2006.

during the final unit. No student who completed all 22 tasks failed the course. Among the students who failed the course, the average grade for the work they did submit was “D+” (“D-” on exams and “C” on assignments). If these students had completed a greater percentage of the course requirements, many would have been able to pass.

On the basis of the analysis described above, I began to consider what possible changes to the course’s content, structure, and pedagogy might help improve student success. Two issues in particular seemed most amenable to remediation: the lack of student engagement and the disparity between reading skill and the level of instructional materials. To address the issue of instructional materials I decided to supplement the textbook with a set of additional tools designed to assist students in accessing and digesting the material. I rejected the idea of adopting a textbook written at a lower reading level because those texts, designed for the middle-school market, did not have content suitable for a college-level course.<sup>11</sup> I prepared a series of illustrated study guides for each chapter of the textbook that included a graphical outline of the content and highlighted key vocabulary, names, and events.

One advantage of these study guides was that individual students could utilize them according to their own needs. Some students might rely on the study guides heavily while others might not need them at all. Other students might find the guides most helpful early in the semester, but as the semester progresses might develop the ability to read chapters without as much support from the study guides. All study guides were posted on a course web site so that students can access them at any time.<sup>12</sup> I took the further step of editing the publisher-provided test bank to rephrase question language and vocabulary to a reading level that seemed more accessible. I did the same for all of my lectures and course instructional materials, giving particular attention to providing more time in my classroom presentations to define vocabulary and explain the meanings for words and concepts that I now better appreciated were not as commonly understood as I had once assumed.

Finally, I added a simple statement in my course introduction explaining that students should expect to encounter new words and concepts over the semester. The textbook is a tough read, I tell students, but there are tools to help and I encourage them that persistence and patience will pay off. Elizabeth Barkley, in *Student Engagement Techniques*, notes that student failure is most acute when there is a disconnect between expectations and skill levels.<sup>13</sup> By adjusting expectations to

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<sup>11</sup> I surveyed 15 history textbooks published for the college and high school markets; all had text written at the 12<sup>th</sup> grade reading level. Only books intended for the middle-school market had lower reading level texts.

<sup>12</sup> I maintained independent web sites for all courses rather than using CEU’s LMS, which was limited in its capacity at that time. With USU’s adoption of Canvas, I now use that platform for all course materials.

<sup>13</sup> Elizabeth F. Barkley, *Student Engagement Techniques: A Handbook for College Faculty* (Jossey-Bass, 2009).

a realistic level along with reassurances that help is available at any time they feel the need for it, I believe students, regardless of reading level, are better prepared to use the textbook.

Addressing the issue of student engagement proved more difficult than adopting strategies to help students bridge the gap between reading capacities and instructional materials. The failure of so many students to do the work required in the course seemed likely due, in part, to factors beyond the content and organization of this specific course. Educational scholars and boots-on-the-ground instructors are all too aware that a myriad of circumstances, from personal psychology to socio-cultural conditions, influence the performance of college students. As instructors, we all appreciate the need to address individual student problems humanely and realistically. But a 26% failure-to-complete rate struck me as requiring more than the usual compliment of flexible due dates, make-up assignments, and extra credit projects. Were there any changes to the course content and instructional approaches that could help improve student engagement?

A detailed discussion of the various pedagogical changes I considered are beyond the scope of this brief essay, but the two principal ones that I adopted were a switch in the thematic focus of the course and replacing the weekly and groups assignments with three active-learning projects. For most general education courses there is on-going discussion within professional disciplines about how best to teach basic surveys. This is true in history. Some historians prefer a broad chronological overview providing a brief look at the main events in the long expanse of U. S. history. In recent years, many historians have adopted a thematic approach, choosing to focus on specific issues, such as social history. The choice is for topical depth rather than comprehensive chronological coverage. I decided to reorganize HIST 1700 from a chronological approach to a topical one, focusing the entire course on the changing concept of freedom through four key episodes from the eighteenth through twentieth centuries.<sup>14</sup> A strong theme that is as relevant today as in the past coupled with an in-depth look at several of the most dramatic eras in American history seemed more likely to capture the attention of students than sixteen weeks of “this happened and then this happened.” This choice is, frankly, a trade-off—much that is important in U. S. history goes unmentioned in the course, but the hope is that what is covered is compelling and will better sustain student interest.

The second pedagogical change I made was to introduce two role-playing activities and a multi-media research and essay project. In one assignment, for example, students are assigned to be either a Northerner or Southerner during the Civil War and to compose a series of imaginary letters describing their experiences. In another, students take a virtual tour of New York City during the Gilded Age and write an essay describing what immigrants might have seen when they arrived in the city. These assignments replace the short weekly essays and group projects

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<sup>14</sup> The four episodes are the American Revolution, the Civil War, the industrial revolution, and the civil rights movement.

previously required, thus significantly reducing the number of graded assignments. These three assignments were organized around separate web sites, which provide students all the needed information, documents, and instructions. The web sites were designed to be visually stimulating and to allow students to interact with materials according to their own schedules. These assignments were made available to students at the beginning of the semester. Although there are specified due dates for each assignment, students had many weeks in which to prepare and complete the projects.

As I began to implement these changes, an even larger transformation took place. In July of 2010 Utah State University took over the College of Eastern Utah. The institution, renamed Utah State University Eastern, continued to operate as an open enrollment institution, primarily offering associates degrees and technical certificates, but integrating its curriculum with USU's main and regional campus system. USU Eastern no longer offered HIST 1700, replacing it with USU 1300. As the sole instructor for USU 1300 at USU Eastern, I taught the course exactly like the former HIST 1700, using the same curriculum and textbook, but with the changes in assignments and study guides I devised following the analysis described above. In the years since the merger, 351 students have taken my sections of USU 1300. It is possible, therefore, to make some assessment of the impact my analysis and re-organization has had.

The data shows a very different grade curve from the previous, pre-merger record. The biggest change has been a shift of the curve from "C" to "B." The percentage of students receiving "A"s in the course has remained the same (13.3% and 13.6%). Significantly, the percentage of students failing the course has declined from 23% to 16%; the decline in "D"s has been more modest, from 10% to 8%. This is heartening, but it is worth noting that failure is still directly related to a lack of engagement. As before, no student who completed all the requirements failed the course. My changes seem to have been most helpful in slightly improving the grade of "C" students. This improvement is largely the result of scores on the active learning assignments. Exam grades have not significantly improved (the average remains a "C," improving from 72% to 76%), despite the addition of the textbook study guides.

The shift in the grade curve for HIST 1700/USU 1300 needs to be placed in the context of a development that had nothing to do with the changes to the course that I implemented. In the years since Utah State assumed control of the old College of Eastern Utah, enrollments have continued to decline.<sup>15</sup> As a reflection of this decline in the USU Eastern student population, enrollment in my sections of USU 1300 has dropped as well. Prior to the merger, enrollment in HIST 1700 averaged 99 students each semester. Post-merger enrollment in USU 1300 has averaged only 41 USU Eastern students per semester. However, since the merger the course has been

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<sup>15</sup> USU Eastern enrollment in Fall 2010 was 2,634; enrollment Spring 2017 was 1,593.

open to students throughout the USU system via Interactive Video Conferencing and these non-USU Eastern students now account for 18% of the course enrollment. I do not have access to the same kind of data that I did for the pre-merger students, but USHE data for the general USU population suggests that these students are likely to have higher ACT scores. At this time there appears to be no significant difference in the performance of the two student populations in USU 1300, but the sample size is too small to draw any significant conclusions.

As of this writing, the USU history department has decided to reinstate HIST 1700. Beginning with fall semester 2017, USU 1300 will no longer be offered at USU Eastern. My approach to teaching HIST 1700 will remain much the same—same thematic approach, four-unit structure with assessment based on active-learning projects, final essay, and four exams. One significant change will be the introduction of a new format for the textbook. Although the course will use the same textbook as in the past, it will now be available to students in digital format through Canvas Inclusive Access, as this format is termed, makes the textbook available as individual chapters (the instructor can select which chapters to provide in whatever order) from the first day of the semester. Students pay for access to the textbook as a course fee at the time of registration (the fee is returned if a student drops the course by the university's established class drop schedule). The cost to students is significantly lower than a print version. Coupling access to the textbook with registration ensures that all students have the textbook from the beginning of the semester. In addition, Inclusive Access comes with a publisher-provided online self-quizzing tool called InQuisitive and online chapter guides. These tools, which are much more sophisticated and interactive, will replace those I designed.

With all the required course materials, including the textbook and active learning assignments, now available through Canvas, I will have access to a wider range of data on student engagement in the course. I am now also using a cloud-based polling app (REEF from iClicker) that should provide additional data on student attendance and participation. Although I can offer no clear or conclusive data to demonstrate that the changes I implemented resulted in improved student success, I am convinced that the exercise has been worthwhile. Utilizing data to diagnose specific problems in student performance has greatly enhanced my understanding of the challenges I face as an instructor and I believe I am better equipped to meet those challenges. As I continue to tinker with the course over the coming semesters, I look forward to applying new sources of data to enhance my teaching.