COMMUNITY INSIGHTS

Emerging Benchmarks & Student Success Trends From Across The Civitas

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CIVITAS® LEARNING

COMMUNITY INSIGHTS

For decades, higher education has envisioned a future that is now upon us. Indeed, we've reached the tipping point where we can look across massive and disparate sets of data to pinpoint the most at-risk students. We can also use these data to identify national trends across hundreds of institutions. The amount and diversity of data is no longer an inhibitor, it's how well-equipped institutions are to act.

For this ***Community Insights*** report, we aggregated intelligence across 2 million active student records with the freedom to explore the most meaningful trends, not just the most conventional best practices. This type of analytic agility is allowing us to identify the next generation benchmarks and trends intended to empower our partner institutions and the broader higher education field.

As we often hear from our partners, "This is the most exciting time in higher ed. Faculty, staff and students have the opportunity to be more successful than ever." They also understand that with great data and intelligence comes great opportunity, and great responsibility. For all institutions playing a part in this movement, this will mean finding a way to use data to work smarter rather than harder.

Core to Civitas Learning solutions is the ability to glean insights, then take action based on each institution's unique data and needs. But, there is also great value in this growing community as we learn from emerging data-informed signals across the broader ecosystem.

The community insights and emerging benchmarks we share here illuminate some new opportunities to drive improvement, often dispelling myths and conventional wisdom, as we all get closer to our goals for student success.

ENGAGEMENT MATTERS

What the Data are Saying:
LMS Activity is Highly Predictive of Success

We learned from the data that engagement matters. Specifically, Learning Management System (LMS) data was highly predictive of student success across most institutions, including traditional institutions who offer most of their courses on-ground.

The LMS data we analyzed included attendance, grade book, syllabus and discussion boards. Across the board, LMS data was predictive, but the type of activity that was predictive varied by institution. In general, what was predictive depended on how the institution used their LMS – for example, for some discussion boards were most predictive, for others, it was engagement in course content, etc. Additionally, the more an institution used their LMS within and across courses, the more predictive the data was of student success.

Partner Insight:
Early Term LMS Engagement Greatly Impacts Persistence

For this Partner Insight, we looked at a four-year research, on-ground institution. We found that their number one predictor of student success for first-year students was LMS activity. Specifically, the percentage of days students logged into the LMS in the first 14 days of the term or semester most heavily predicted their potential to persist.

Figure 1.1: *On average, across 23 Civitas Partners, 20% of the top predictors were engagement data. For this on-ground institution, the number one predictor was an LMS variable.*

The average persistence rate for first-year students overall was 88%. However, when students interacted with

BENCHMARKING THE CIVITAS

This benchmark is based on 23 institutions including 12 on-ground and 11 online.

- *Overall, 80% of the institutions had LMS activity in their top 10 predictive variables.*
- *For first-year students, 20% of the top 10 predictors were engagement data.*
- *LMS data was strongly predictive for both on-ground and online institutions.*
- *64% of the shifting we saw in predictions during the term was due to LMS activity.*

ENGAGEMENT MATTERS

The LMS fewer than five of the first 14 days in the term, persistence dropped to 76% vs. 92% for students with more than five days of activity.

Using this insight from Illume and applying it against students in the current term, we found ~4,000 students who had five or fewer days of activity in the first 14 days of the term. However, not all of these students were at high risk of persistence. Leveraging the individual prediction for each student, we narrowed the group to just those who were at high risk for non-persistence. Adding the prediction filter to focus on the bottom quartile, it dropped the list of students to 1,200 and a persistence rate of 65%.

But, drilling in even deeper, and only selecting the segment of students with zero to one day with any LMS activity, the population dropped to ~200 and with a persistence rate of 47%. More than half of the students in this segment will leave the institution unless they receive an intervention.

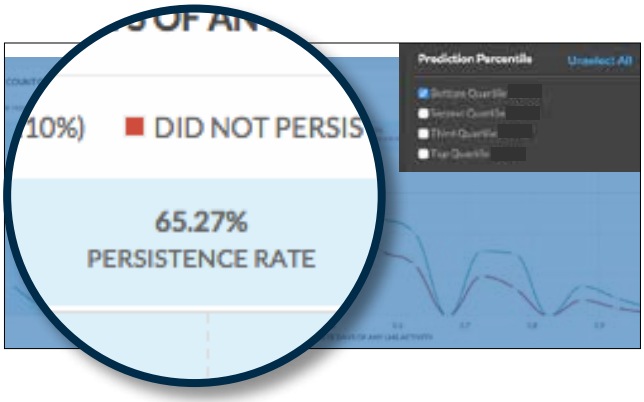

Figure 1.2: *This institution filtered the population to those least likely to persist, then pulled a student list for precise outreach.*

With tools that allowed for quick, concise and manageable outreach, all of these students could be engaged and encouraged to take actions that would increase their chances for success.

Why It Matters

While LMS activity and engagement are highly predictive, understanding which specific activity is most predictive at any institution requires a closer look into how they specifically use their LMS. What is predictive at one institution varies greatly from another. For one, it may be the attendance, and for another it might be the calculated ratio of activity or inactivity of students in relation to their specific classes.

By utilizing benchmarks as general guidelines, along with institution-specific LMS data and custom predictive models, the college or university can target and personalize their outreach to specific students. Simple messages that inform the student of seemingly small things they can do to get better engaged can have large positive effects. We are seeing evidence that authentic, personal and positive messages or nudges from advisors and faculty early in the term have a positive impact on student engagement.

Most significantly, there are important nudges that can be given in-term, ensuring a student stays on her most successful path to graduation.

IT'S NOT JUST FAILURE

What the Data are Saying:
Understanding High GPA Departures

The second big Community Insight we learned is that it is not just failure that is causing students to leave an institution. Most institutions in our report are losing very large numbers of students with high GPAs.

We found this to be true across all types of institutions we studied, which included 20 community colleges and 35 universities. In fact, 99% of the Civitas partner institutions in this sample were losing more students above 2.0 GPA than below it, and a staggering 42% of the overall non-persisting students had a 3.0 or higher GPA.

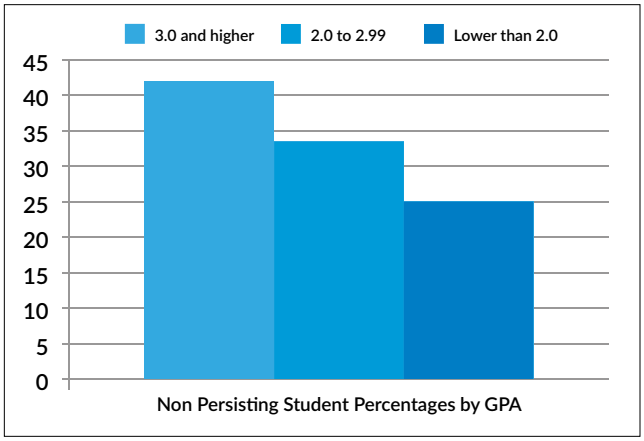

Figure 2.1: *In our sample of 55 Civitas Partners representing 2 million active students, more students left the institution with a GPA of 2.0 or better than below it.*

If the institutions were to base their student outreach on generalizations or misconceptions that only students with 2.0 GPAs or below were at-risk, they would have overlooked a large segment of students who not only needed outreach, but stood to benefit greatly from it.

Interestingly, factors such as online vs. on-ground and access vs. selective institutions had little variance. And, we validated that the majority of students in this cohort did not have any failing course grades in the prior term.

We do know that degree plan alignment is often a top predictor for high GPA students and could be used for further analysis and redirecting students.

BENCHMARKING THE CIVITAS

This benchmark is based on a data set of 2 million students from 55 institutions.

- *On average, 42% of the non-persisters came from the 3.0 – 4.0 GPA range.*
- *Another 33% came from the 2.0 – 3.0 GPA range, and only 25% had GPAs of 2.0 or below.*
- *Breaking this out by institution type, we saw a slight variance between online and on-ground, and almost no variance between access and selective institutions.*
- *76% of the high GPA non-persisters did not have a failing grade in the prior term.*

Partner Insight:
817 At-risk High GPA Students Identified for Critical Outreach

Data from this two-year community college was a prime example of this benchmark. We saw that 43% of the non-persisters were leaving the college with 3.0 – 4.0 GPAs. Granted, some might have been transferring, but they were not all leaving for successful outcomes. This hurt the institution, as well as the student.

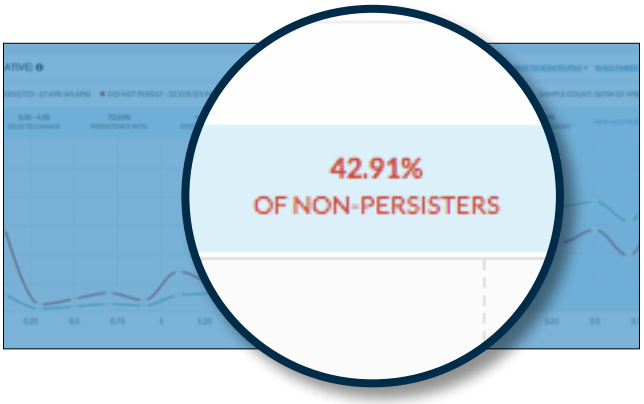

Figure 2.2: *For this institution, 43% of their non-persisting students had a GPA of 3.0 – 4.0.*

We used comparison predictors to identify the key indicators to help spot those high GPA students who might be at risk of leaving. We looked at two predictive variables together – high GPA and low degree plan alignment. This alignment measured how closely the courses the student had taken aligned with the courses a successful graduate in that major took.

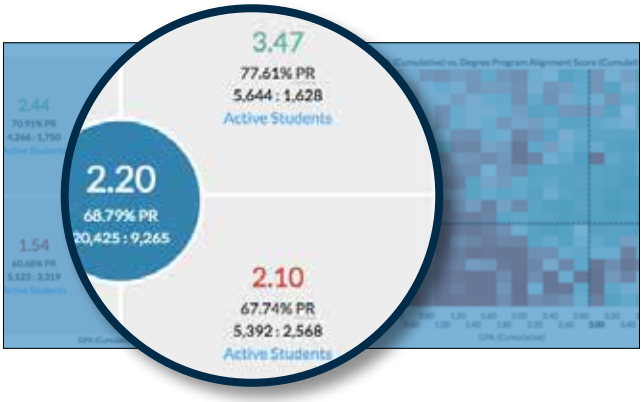

Figure 2.3: *By combining a top predictor (degree plan alignment) with GPA, this institution identified a group of students that had a 10% lower persistence rate.*

When we compared these side-by-side, we saw a 10-percentage point difference for high GPA students between high vs. low degree plan alignment. By utilizing the Student List feature to access the information for the 817 students in this low degree alignment cohort, the advisors at this institution could take quick action.

Why It Matters

Many students that appear to be successful are actually in need of greater support or they risk eventual failure. Institutions cannot provide relevant outreach if they don't understand who these students are and the signals to identify them before they leave.

Each of these students is an investment for the institution. Those that move on without a credential are a financial loss for the institution, and most importantly, a potential loss of a promising graduate. Institutions cannot provide relevant outreach if they don't understand who these students are and the various reasons they are moving on.

COURSE GRADES MATTER

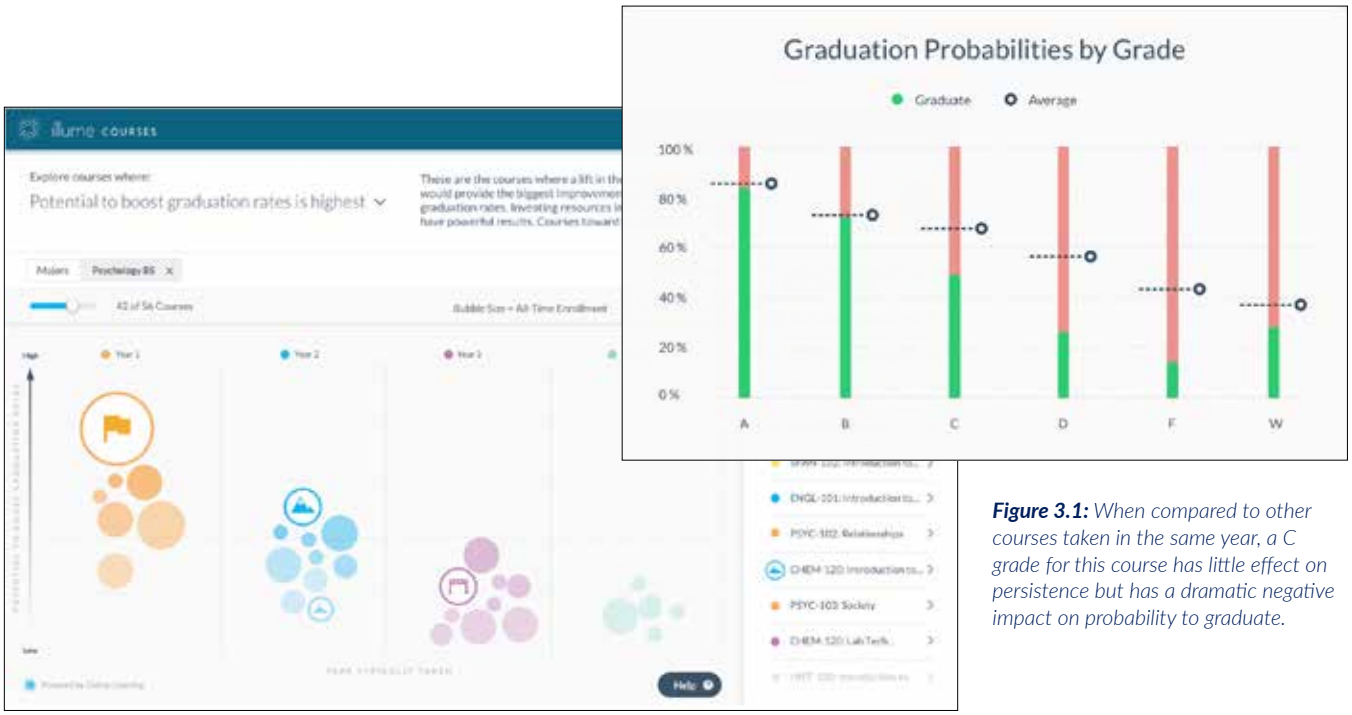

Figure 3.1: *When compared to other courses taken in the same year, a C grade for this course has little effect on persistence but has a dramatic negative impact on probability to graduate.*

IMPORTANCE OF GRADE SIGNALS

Course grades can be strong signals of graduation likelihood… and it's not just failing grades that matter. Grade signals are particularly useful when you look at them in relation to a major. This is true regardless of institution type or size, with grade signals existing across 100% of Civitas Partners.

We have broken these benchmarks into four key types of grade signals.

YELLOW FLAG

A C grade has little impact on persistence, but dramatically reduces likelihood to graduate.

CHALLENGE

Higher than average D, F or W grades earned, and for those students a significant reduction in likelihood to graduate compared to similar courses.

QUALIFIER

Only an A improves likelihood to graduate.

LATE HURDLE

An upper division course that is twice as predictive of graduation when compared to similar courses.

COURSE GRADES MATTER

What the Data are Saying: Yellow Flag Grade Signal

The next insight we saw was that grades were strong signals, and it was not just failing grades that mattered. We began with Yellow Flag Signals. In these courses, students who got a C would persist — they didn't leave immediately after earning the C — but their likelihood to graduate was dramatically reduced. Looking across institution types, common Yellow Flag courses for community colleges were developmental education while freshman writing courses were more common for four-year institutions.

Partner Insight

To illustrate, we explored the data from an English Composition and Rhetoric course. Students who earned a C in this course at this four-year institution were very likely to persist, however they were only 48% likely to graduate. This was compared to the average graduation rate of 62% for the course. Students who earned an A or a B had a 67% likelihood to graduate, so we saw a significant delta between 67% and 48%, despite the fact that the student had passed the course.

BENCHMARKING THE CIVITAS

- *Students who earned a C in Yellow Flag courses tended to persist but not graduate when compared to other courses taken in the same year.*
- *Often included dev ed for community colleges and freshman composition or writing for universities.*
- *Every institution in the Civitas had Yellow Flag courses.*

What the Data are Saying: Challenge Grade Signal

Another signal we saw in the data was probably more familiar to many in higher education. These were Challenge Signals – courses where a high percentage of students earn a D, F or W. For this benchmark, we filtered to find the courses where this also dramatically reduced the likelihood of graduating. There was a great deal of consistency in the subject matter of the Challenge courses, with the majority being in Math or Science subjects.

Partner Insight

At one institution, a Challenge course was Calculus Prep, where 45% of the students earned a D, F or W. By comparison, the overall D, F or W average percentage was 13% for courses taken in the same year. Only 24% of those D, F, W students in Calculus Prep were predicted to go on to graduate, compared to 71% who earned an A, B or C.

BENCHMARKING THE CIVITAS

- *A significantly above average percentage of students earned Ds, Fs or Ws from Challenge courses when compared to other courses taken in the same year.*
- *D, F and W students had at least a 50% lower likelihood of graduating compared to students who earn an A, B or C.*

COURSE GRADES MATTER

What the Data are Saying: Qualifier Grade Signal

When we looked across the data set we saw Qualifier Signals – those courses where only an A improves the likelihood to graduate. These tend to be the first course in a major, and as such, lay critical foundations for future success. Knowing the courses with Qualifier Signals, advisors and faculty could coach students on the importance of applying all that they have to succeeding with an A.

Partner Insight

In this case, we looked at one institution's Introduction to Research course, which signals said was a Qualifier course. Students with an A were 75% more likely to graduate compared to students with a B or below.

What the Data are Saying: Late Hurdle Grade Signal

Late Hurdle Signals are attributed to courses that students take in the second half of their academic career. These courses are twice as predictive of graduation as courses taken in the same time frame.

Because they are upper division, major-focused courses, there is not much consistency in which courses these are. But, Late Hurdles are pivotal to students being able to complete the last mile of their academic journeys successfully.

Partner Insight

We observed that in an upper division Psychology course, each letter grade of improvement bumped graduation likelihood by an average of 6.6% compared to 3% on average for courses taken during the same year.

Students who earned As and Bs were 92% likely to graduate, compared to 65% for students with letter grades below that.

Why Course Grades Matter

With better intelligence about the long-term impact of each course grade, institutions can provide both tactical and strategic responses and outreach.

If they know an English Composition class grade is critical to likelihood to graduate, they can provide scaffolding in the way of direct learning assistance and tutoring for students in real time.

They can also review transcripts for transfer students and inform them before they get to Qualifier and Late Hurdles if they haven't shown strength on the related foundation courses that feed them.

As with the other predictions, these are institution and even major-specific. While the benchmarks are a great reference point, it's important that institutions know how to support the academic journey, rather than generalizing and missing the mark.

KNOWING WHAT WORKS

What the Data are Saying:
Initiative Analysis Across the Civitas

For this benchmark, we analyzed a group of programs, initiatives and interventions that our partner institutions had underway to gauge what was working best. We utilized prediction-based propensity score matching to create control groups that gave us a baseline for measurement.

We analyzed cross-institutional programs, including those that were specific to Civitas apps, and those that were not, and could clearly see which had a negative, neutral or positive effect. Below are the programs that we found were creating the overall greatest lift in persistence.

Why It Matters

Success courses, orientations, course redesigns and tutoring centers… many thousands of initiatives are underway to improve student outcomes. This is true across institution types and sizes. But, how are institutions to know what's working?

Being able to confidently predict the effectiveness of an initiative, and then accurately assess the true impact is vital. Our collective goal is to focus precious monetary and human capital on what has the greatest overall affect on students and the institution.

BENCHMARKING THE CIVITAS

1. Student Success Course

Freshman course focused on helping students make the transition to college successfully.

- 9.6% lift in persistence (p-value: 0.002)

2. Math Tutoring

Math tutoring center available to all students at the institution but targeted for first-year students.

- *Fall 2014: 5.8% lift in persistence (p-value: 0.022)*
- *Overall: 5.8% lift in persistence (p-value: 0.000)*

3. Civitas Learning's Inspire for Faculty

Our engagement app for faculty that helps identify students ready for intervention or inspiration and tests outreach efficacy.

- *Fall 2015: 4.9% lift in successful course completion (p-value: 0.004)*
- *0 Terms Completed by Fall 2015: 4.1% lift in successful course completion (p-value: 0.025)*

4. Civitas Learning's Inspire for Advisors

Our success coaching app for advisors that helps identify students ready for intervention or inspiration and tests outreach efficacy.

- *0 Terms Completed by Fall 2015: 4.2% lift in persistence (p-value: 0.023)*

ABOUT THE COMMUNITY INSIGHTS REPORT

Community Insights is a quarterly report based on collective data from across the Civitas Learning customer base. This particular report included 55 institutions and 2 million active students.

The data was analyzed using Civitas Learning's Student Insights Engine and all of the modules in the Illume application, including Students, Courses and Impact. Illume allows institutions to use powerful predictors and sophisticated filters to better understand their students, and what can really help them succeed.

ABOUT OUR PROCESS

Better Intelligence Through Unique Predictive Models

We take in data from disparate silos and unify the data, and derive features. 95% of the predictive power of our Student Insights Engine and action apps comes from derived features that inform more than 1,500 predictive models. Each college or university partner has 15-30 unique models that create a DNA of their data, informing a whole series of uniquely-tuned applications and actions.

Application of Statistical Rigor

The main goal in any experimental design is to find a control group comparable to the group assigned to treatment or intervention. To do this we use a concept called prediction-based, propensity score matching (PPSM). This is an algorithm that matches a pilot student with a non-pilot student using both prediction and propensity scores, thus creating an artificial control group for apples-to-apples comparison on intervention impact. This eliminates selection bias and ensures that the two pairs of pilot-control groups are virtually indistinguishable.

ABOUT CIVITAS LEARNING

Civitas Learning is the insight engine for higher education. By building a community of forward-thinking higher education institutions, we bring together the best of leading-edge technology, design thinking, and data science in our mission to help a million more college students a year learn well and finish strong.

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