Using Starfish Strategic Analytics to Study Course Performance Impact from COVID on Your Campus

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House Keeping

Change your name in Zoom to include your name **and** institution.

This will be recorded. The recording and deck will be shared out following the session.

If you have questions, please use the QA box. We will work to answer the questions as we present, live during our QA period (if time), or will send responses to questions as follow up.

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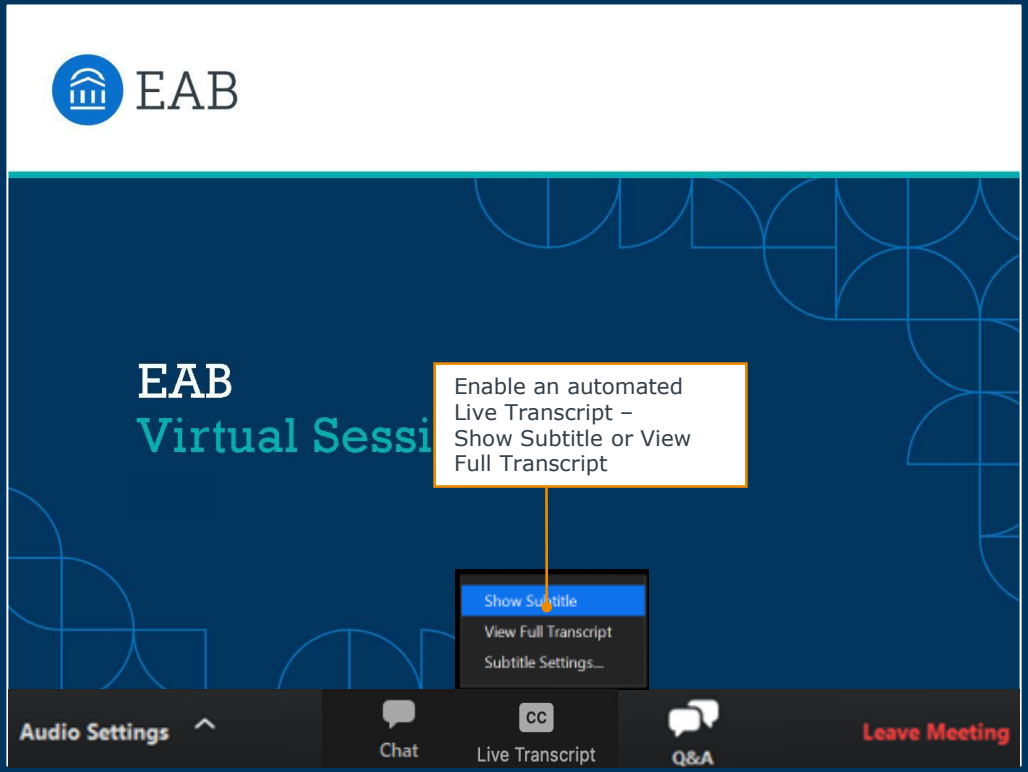
Captioning



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- Strategic Analytics Deliverables
- Why This Is Important Now
- Analyzing Course Outcomes to Identify Inflated Grades or DFW Rates/Retakes/Sequencing
- Analyzing Course Outcomes to Identify Students Who May Need Additional Support
- Next Steps

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Predictive Analytics is an Input for Decision-Making

The Predictive Scores from our models are not guaranteed outcomes for individual students; they are 'scientific forecasts' based on available data and mathematical algorithms. We recommend combining scores with your own more personal knowledge of students in order to better target resources and supports toward the students who need them most.

About Strategic Analytics..

- Based on consensus across the community membership when PAR was **founded in 2011**
- Designed to ensure **consistency within the Analytics database**
  - Helps to build strong predictive models
  - Enables comparisons across Analytics Community
  - Empowers the ability to share insights and establish best practices

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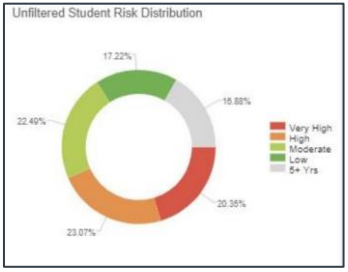
What is Included in Strategic Analytics?

Student Explorer

- The analytics reports allow exploration of predicted outcomes for different groups of students
- Users can understand potential risk factors that influence retention and completion for specific student populations

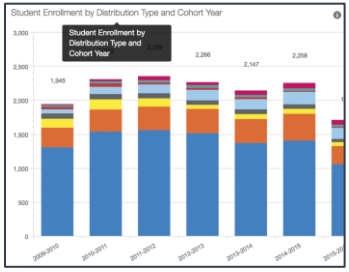


Course Explorer and Course Trends

- The tools allow exploration of student course outcomes and course trends by year
- Users can specify a term or range of terms for analysis
- Analysis can range from the institution level to college to program to individual sections

Historical data

- Allows you to view enrollments and student outcomes over time
- Enrollment numbers, credits earned and retention rates, and more can be viewed in order to help identify trends and whether changes to programs or with certain groups of students are having an impact



Other reports available:

- **Benchmarks Report** helps you compare your institutions' student performance with the student performance of similar Starfish institutions.
- **Model Performance Report** displays various items about model, including Factor Importance, Model Summary, and Distribution of Scores.

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Key Symbols and Terminology

Add filter. The number beside it tells you how many filters you have selected.

Maximize the chart or data you have selected.

Minimize the chart or data you have selected

Download the data in a Power Point, PDF, or Raw Output (CSV)* only if you have Download permission.

Bookmark and rename for ease of use.

Other terms for today's session

- Pre-COVID = Spring or Fall 2019
- During COVID = Spring 2020

Please log in to your Strategic Analytics Dashboards if possible

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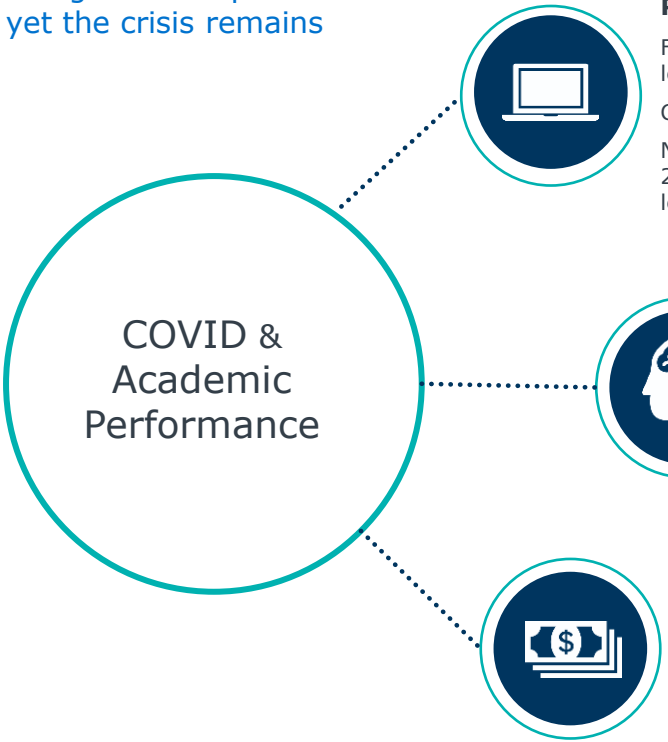
Why Now?

Things have improved - yet the crisis remains



Preparedness

Freshmen since Fall 2020 have arrived less prepared than their previous cohorts.

Continuing students were also impacted.

Not all students who were forced in Spring 2020 to learn online were good online learners.

Mental Health

COVID exacerbated a growing crisis in students: illness or loss of loved ones, financial worries, feelings of isolation, uncertainty about the future and so many other reasons

Financial

Declines in grades can impact student financial aid eligibility and lead to stop out.

Family financial struggles can add to stress for students and distract from their grades.

Hechinger Report: (Sanchez, 2022)

Student Success Playbook COVID Edition (Venit & Bevevino, 2021)

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University of Missouri

31,103-student public research institution in Columbia, MO

89% retention rate and 73% six-year graduation rate

Starfish partner since 2014, utilizing the platform for advising workflow, early alerts, and strategic analytics

CHALLENGE

The University of Missouri (Mizzou) had a fairly strong graduation rate but lacked data-informed insight into how to elevate it further.

As a large, decentralized campus, running university-wide initiatives to improve outcomes was particularly difficult.

Identifying Key Indicators of Future Faltering

Starfish Allows Mizzou to Identify and Engage At-Risk Students

Insights from Starfish Strategic Analytics: Critical Predictors of Not Retaining

Using Starfish to Identify Why Some Students Aren't Graduating—and Who Those Students Are

Ongoing GPA below 2.0

Credit completion below 75%

Course withdrawals above 1

Intervention Campaigns Deployed in Starfish

Reaching and Engaging Students Before They Slip Through the Cracks

School	Students Contacted via Campaign
College of Arts & Science	Students with 1+ course withdrawals
College of Agriculture, Food & Natural Resources	Part-time students, and full-time students who drop below full-time credit enrollment threshold
College of Business	Students with 30+ credit hours and GPA below 2.6
College of Engineering	All pre-engineering students

92%

Higher retention rate for students with 1+ course withdrawals who attended a campaign-initiated advising appt. compared to students who didn't attend an appt.

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Have you logged into your strategic analytics dashboards?

Poll

a. Yes

b. No

c. I don't have access

d. My institution doesn't currently have strategic analytics

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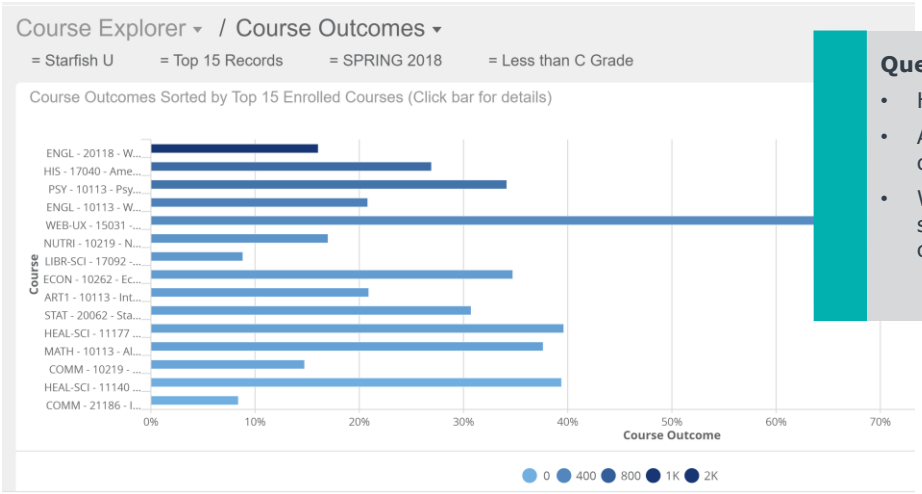
What Were Your Top 15 Lowest Success Courses Pre-COVID and During COVID

Course Explorer-Course Outcomes-Less Than C Grade-+Filter-Term Code Fall 2019 & Fall 2021



Questions for Consideration:

- Have these courses changed?
- Are you surprised to see these courses?
- What support currently exists for students enrolled in these courses?

Recommendation:

- Create cohorts within Starfish to proactively monitor the students when enrolled in these low success courses.
- If not already surveying these courses, consider targeted surveys that could connect the students with interventions

Use dashboards to dig deeper:

- What courses are problematic for students of color or students on Pell? Are they the same as these? Different?

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What Were Your Top 15 Highest Withdrawal Courses Pre-COVID and During COVID

Course Explorer-Course Outcomes-Withdrawal-+Filter-Term Code Fall 2019 & Fall 2021

Questions for Consideration:

- Are these courses some of the same low success courses? Are they all different?
- Have these changed with COVID?
- What support currently exists for students enrolled in these courses?

Recommendation:

- Create cohorts within Starfish to proactively monitor the students when enrolled in these high withdrawal courses.
- Leverage the Course Withdrawal Experimental flag in Starfish to enhance communication and workflows to support students who withdrawal from course(s).

Use dashboards to dig deeper:

- Does this change when filtering by program? What supports/changes can your Deans and Department Chairs make at the program level?

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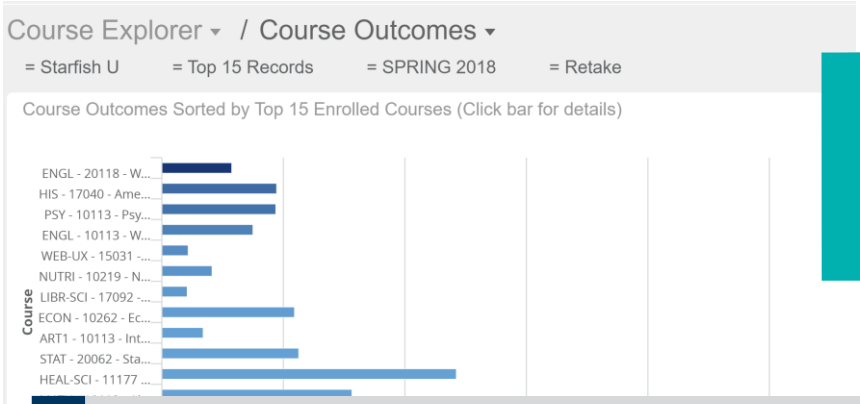
What Were Your Top 15 Highest Retake Courses Pre-COVID and During COVID

Course Explorer-Course Outcomes-Retake-+Filter-Term Code Fall 2019 & Fall 2021



Questions for Consideration:

- Have these changed with COVID?
- What support currently exists for students enrolled in these courses?

Recommendation:

- Create cohorts within Starfish to proactively monitor the students when enrolled in these high retake courses.
- Leverage the Course Retake Experimental flag in Starfish to enhance communication and workflows to support students who are retaking course(s).

Use dashboards to dig deeper:

- Apply filters to Fall/Spring 2020 terms and for students in their 2nd, 3rd, or 4th year. This will highlight students who took the pre-requisite course during terms particularly marked by COVID implications. Consider partnering with IR or data teams to identify students who are still at the institution, who failed a course that must be retaken, and have not yet retaken the course. *Would it be helpful to inform faculty teaching the retake course for the possible contributing reasons for students retaking?*

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Is there value to surfacing a student is retaking a course that was failed or withdrawn in a term impacted by COVID?

Poll

a. Yes

b. No

c. I am not sure

d. My department/institution has already had discussions about this and supporting students retaking courses.

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Go Deeper into Key Courses in Top 15: C or Less, Retake, & Withdrawal

Recommendation:

- [Requires Cohort] Consider targeting referrals to cohorts of these courses to resources such as Writing Centers or Tutoring to provide course-based support.
- [Requires Cohort] Leverage Advanced Fields in your message templates tied to email/text communications tied to early alert items. This will enable custom messaging to students around what steps to take to improve performance. EX: *This course has been identified as causing students to struggle in recent semesters. We are here to help. In looking at student outcomes in the semesters studied, we found that students who attended tutoring 2 or more times during the semester, passed the course at higher rates.*
  - If you are interested in learning more about what the research says about the importance of your message templates, check out Macie Fairfaix's "Missed Connections" webinar.
- [Requires Cohort] Are you using your Retention Scores? Leverage the score reasons to support conversations with these students to get to the core of why the student may be struggling in courses. Using Retention Score Factors to Support Advising is a good tool to get you started.

Race/Ethnicity	# Records	# Students	C or Better	Withdrawal	Retake	C or Better (Retain)	C or Better (# Students Lost)	Not C or Better (Retain)	Not C or Better (# Students Lost)
American Indian or...	83	74	74.70%	6.02%	7.23%	72.58%	17	52.38%	10
Asian	343	307	85.13%	5.25%	5.83%	86.64%	39	78.43%	11
Black or African A...	363	329	77.69%	5.79%	4.96%	80.14%	56	58.02%	33
Hispanics of any race	1,991	1,797	79.96%	5.83%	6.38%	84.17%	252	55.64%	172
Native Hawaiian or...	111	95	74.77%	8.11%	9.91%	84.34%	13	75.00%	7
Nonresident Alien	578	515	87.54%	2.60%	6.06%	86.56%	68	79.17%	15
Race and Ethnicity ...	934	864	84.58%	4.50%	4.93%	84.05%	126	56.94%	61
Two or more races	555	489	78.92%	8.11%	8.11%	80.37%	86	67.52%	38

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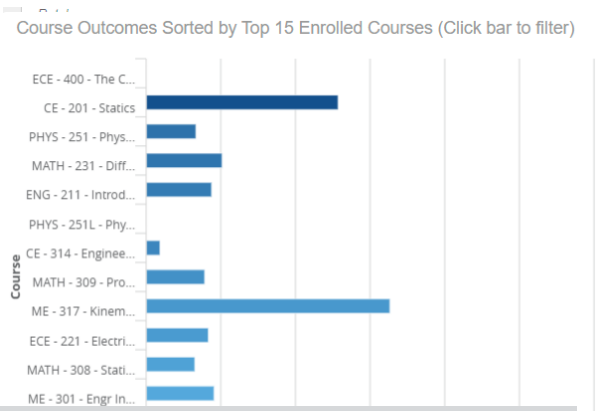
Course Sequencing, Did Students Taking a Prerequisite Early in COVID Impact Current Performance?

Course Explorer – Courses by Program – multiple additional filters

Navigating the filters

1. Have a list of the courses in your program that require a pre-requisite course. EX: To take ECON2000, students must successfully pass ENC1100.
2. Apply filters for terms after Fall 2020 and for students who are 2nd, 3rd, or 4th year students
3. Select your program/programs that you are investigating.



Recommendation:

- [Outside of Starfish] Get a list of students who took the pre-requisite early in COVID but have yet to enroll in one of the identified courses if the course is likely to be taken or required for their program. Generate an attribute combining this set of students with enrollment in one of the identified courses so that their Advisor and/or Instructor for the course is informed the student may not be as well prepared given that the prerequisite was taken a COVID term.

Use dashboards to dig deeper:

- Check to see if delivery mode makes a difference in the performance in the courses. If so, what is the best way to ensure that students register for sections where optimal results is evidenced in the data.
- **Recommendation:** if course delivery mode is significant, consider using the Starfish Intake Form and including questions that address students' comfort level for online learning.

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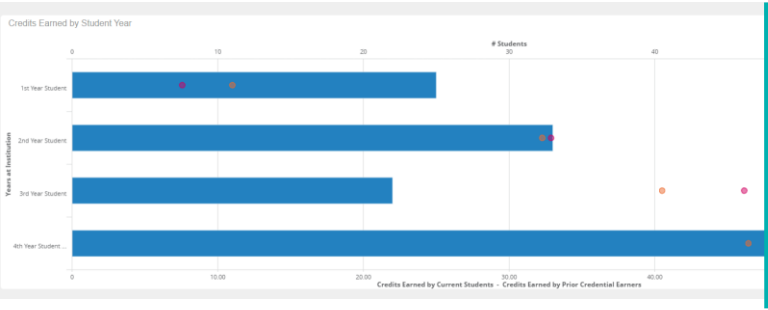
Are Students Achieving Credits at the Same Pace as Previous Graduates?

Student Explorer – Credit Accumulation



Questions for Consideration:

- Any surprises looking at credit accumulations for current students?
- Students in the 3rd Year bar, would have started in 2020, do their gaps outpace what you may have expected?

Recommendation:

- Create an attribute-based system flag to target full time students enrolled in less than 15 credits, aligned to the 15 to Finish. You may also align student facing message templates for the flag to encourage completing 30 credits per year to be able to graduate on time.

Use dashboards to dig deeper:

- Consider adding filters to see patterns that could exist for traditional aged students compared to adult learners.

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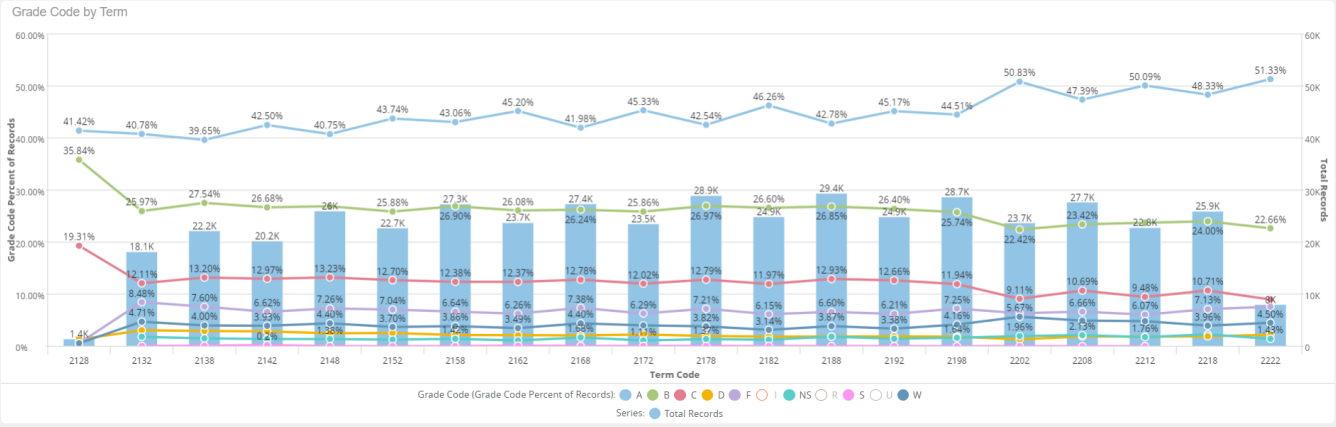
Were Certain Terms Marked with Increased Withdrawal or Inflated Grades?

Course Trends – Grade Code by Term – Filters for Fall/Spring – Filters on Grade Codes

How do grade codes change by term? Use the Grade Code legend below to select which grade codes to view. Use the filter icon (upper right) to narrow to select a program or course. Use the breadcrumb (above) to navigate to other report pages.



Questions for Consideration:

- Are there increases in passing grades or withdrawals across terms?
- If withdrawal increased, are there policies in place or that could be created to make it harder to withdraw from a course

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Has your institution noted changes in student outcomes compared to Pre-COVID?

Poll

a. Yes – Inflated Grades during 2020

b. Yes – Increased D, F, Ws

c. We studied this and did not note any changes

d. I am not sure

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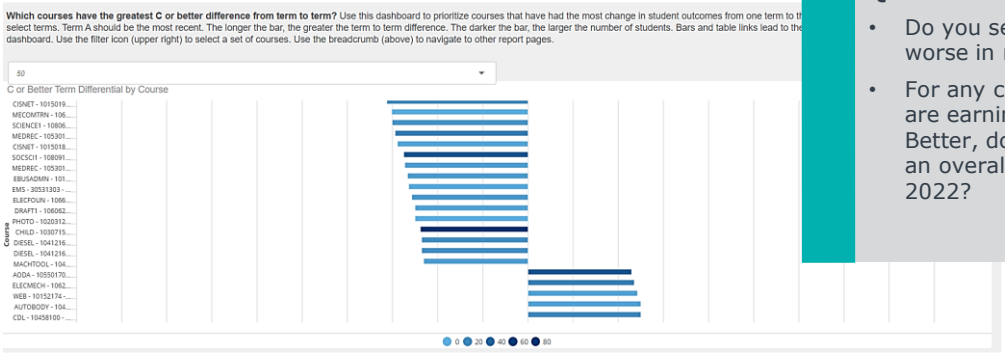
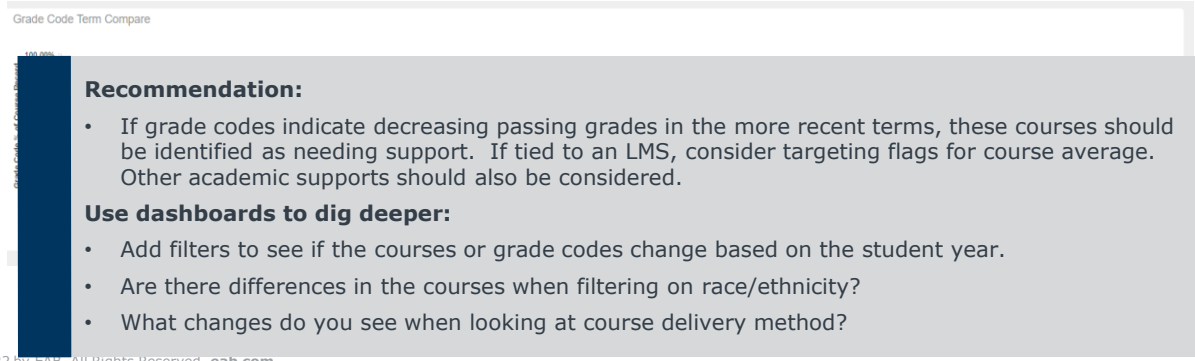
Were There Differences in Students Passing Courses Comparing Terms?

Course Trends – Courses – C or Better Difference – Term to Term – Filters term codes to look at Spring 2020 and Spring 2022 - # Students per Course >25





Questions for Consideration:

- Do you see courses performing worse in more recent terms?
- For any courses where students are earning fewer grades for C or Better, does the department have an overall strategy in place for Fall 2022?

Recommendation:

- If grade codes indicate decreasing passing grades in the more recent terms, these courses should be identified as needing support. If tied to an LMS, consider targeting flags for course average. Other academic supports should also be considered.

Use dashboards to dig deeper:

- Add filters to see if the courses or grade codes change based on the student year.
- Are there differences in the courses when filtering on race/ethnicity?
- What changes do you see when looking at course delivery method?

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Special Thank You for Our Partners Who Contributed Their Ideas

"Data are just summaries of thousands of stories – tell a few of those stories to help make the data meaningful."

Chip and Dan Heath, Authors

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Next Steps

- If you currently have Strategic Analytics and want to get started on some of this work, reach out to your Strategic Leader for what could make sense for your institution.
- If you don't have Strategic Analytics, connect with your Strategic Leader and/or your Account Manager to learn more.
- If you are not part of your institution's team who supports Starfish, but want to leverage your existing Strategic Analytics data to operationalize efforts to support students, like you saw in today's session, connect with your Starfish Core team with ideas.
- Additional Help on the Strategic Dashboards
- Join the Starfish Analytics Community via Strategic Analytics Office Hours

Starfish Strategic Analytics Office Hours
Next Occurrence: June 3, 1:00 - 2:00pm CT

Join other Starfish Partners working with Strategic Analytics on the first Friday of every month. Click here and comment on the post to be added to a recurring calendar hold as a reminder for this series. **No registration.**
Just join session at: https://eab.zoom.us/j/97829625894?from=addon

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