An Investigation into Overall Success and Withdrawal Rates

AY 2021-2022

LSUE EUNICE

Office of Institutional Effectiveness and Accreditation

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Executive Summary

This paper was prepared by the Office of Institutional Effectiveness to inform the LSU Eunice community on the success rates defined by a final grade of A, B, C or P (pass) for AY 2021-2022. The primary purpose is to answer the questions below by comparing the success rates for AY 2021-2022 to longitudinal data from AY 2010-2011 through AY 2020-2021 so that decision makers may continue to make changes as they deem necessary to improve success rates and meet student needs. The calculations in this paper include all online courses and all sites for fall 2021 and spring 2022. Summer and intersession courses were not included.

1. What was the overall success rate? The overall success rate was 71.1% (see Table 1).

   How does the success rate for AY 2021-2022 compare to longitudinal success rates? The 71.1% was 0.9% of a percentage point below AY 2020-2021's success rate of 72.0% (see Table 2 and Figure 1). The 71.1% was 2.8 percentage points below the overall longitudinal success rate of 73.9%. The success rate is the second lowest for the time period studied.

2. What is the overall withdrawal rate? The withdrawal rate was 11.4%.

   How does the withdrawal rate for AY 2021-2022 compare to longitudinal withdrawal rates? The 11.4% withdrawal rate was 0.4 of a percentage point less than the withdrawal rate of 11.8% from AY 2020-2021 (see Table 2 and Figure 1). The 11.4% withdrawal rate exceeds the overall longitudinal withdrawal rate of 10.3% by 1.1 percentage points. Further, the 11.4% withdrawal rate is the third highest withdrawal rate in the period studied.

3. Are there gaps in success rates among individual student sub-groups in AY 2021-2022? The answer is yes; there appear to be gaps in performance.

   If so, which subgroups? There appear to be gaps in success rates with the following demographic groups (see Table 1). Note that these groups contain many of the same students.

   - Black (non-Hispanic) students = 56.8%. The 56.8% represents a 0.4% of a percentage point decrease from 57.2% in AY 2020-2021. Data indicated that the decrease in the success of Black (non-Hispanic) students slowed. For AY 2019-2020, the success rate was 64.7% dropping 7.5 percentage points in AY 2020-2021 to 57.2% (see Table 4 and Figure 3).
   - American Indian or Alaska Native students = 55.6%. The 55.6% is down 18 percentage points from AY 2020-2021.
   - Pathways to Success students = 54.3%. This is 2.7 percentage points higher than the success rate of 51.6% from AY 2020-2021 (see Table 5 and Figure 4). However, the success rate of 54.3% is seven percentage points below the longitudinal overall success rate of 61.3%.
   - New first-time students = 62.0%; This is a one percentage point decrease from AY 2020-2021 (see Table 6 and Figure 5). The 62.0% success rate is 5.2 percentage points below the longitudinal overall success rate of 67.2%.

- Returning freshmen = 61.5%; This is a 2.1 percentages point decrease from the 63.6% from AY 2020-2021 (see Table 6 and Figure 5). The 61.5% success rate is 4.6 percentage points below the longitudinal overall success rate of 66.1%.

4. What is the success and withdrawal rate for Developmental Education and General Education English composition courses?

The success rate for developmental education English composition was 59.0% (see Table 7 and Figure 6). This was 4.8 percentage points below the success rate of 63.8% in AY 2020-2021. In addition, the 59.0% is 11.4 percentage points below the longitudinal overall success rate of 70.4%.

The success rate for general education English composition was 73.1%. This was 0.3 of a percentage point below the 73.4% in AY 2020-2021 (see Table 7 and Figure 6). The 73.1% is two percentage points below the longitudinal overall success rate of 75.1%.

5. What is the success and withdrawal rate in Developmental Education and General Education Mathematics courses?

The combined success rate for all three developmental mathematics courses was 45.0%.[1] This was 3.1 percentage points below the 48.1% from AY 2020-2021. Success rates in developmental mathematics courses have been steadily declining since AY 2013-2014 (see Table 8 and Figure 7). The 45.0% is 8.3 percentage points below the longitudinal overall success rate of 53.3%.

The success rate for all three general education mathematics courses (College Algebra) was 57.2%.[2] This was 2.7 percentage points higher than the 54.5% from AY 2020-2021 (see Table 9 and Figure 8). The 57.2% was 0.8 of a percentage point below the longitudinal overall success rate of 58.0%.

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[1] For AY 2021-2022, the success rate for MATH 0001 = 44.9%; MATH 0015 = 44.0%; and MATH 0021 = 48.1%.

[2] For AY 2021-2022, the success for MATH 1015 = 54.5%; MATH 1020 = 66.7%, and MATH 1021 = 50.8%.

Introduction

This paper is a follow-up to an investigation into student success at Louisiana State University at Eunice[3]. The original paper sought to answer three primary questions asked of the Office of Institutional Effectiveness in fall 2021:

1. What is the overall success rate for students taking courses in AY 2020-2021?

2. Are there gaps in success rates among individual student sub-groups?

3. What is the overall withdrawal rate?

The response to the questions, An Investigation into Overall Success and Withdrawal Rates AY 2020-2021, was published on the Strategic Planning Website in November 2021. In addition, a separate paper on student retention was completed in December 2021.[4] Generally, both papers showed decreasing success and retention rates and that the decreases predated COVID-19. Given this information, LSU Eunice administration completed a realignment of its organization in January 2022.[5] The Divisions of Liberal Arts and Sciences and Mathematics were combined into the Division of Arts and Sciences in the reorganization. In addition, all Student Affairs functions including the administration of the Pathways to Success Program, tutoring, academic advising, and disability services were placed under the Office of Academic Affairs.

Further, a committee made up largely of faculty was named in the latter half of the spring 2022 semester to investigate the services and staffing that would be needed to staff a new Learning Commons located in LeDoux Library. The purpose of the Learning Commons is to

- increase student success,

- increase student retention, and

- determine the digital literacy skills students needed for students to be prepared for the jobs of the future related to the Achieving the Dream initiative.

This committee worked into the summer 2022, filing two reports on June 15, 2022.[6]

The overarching theme to AY 2021-2022 was to increase student success, retention, and completion while determining the digital literacy skills needed for the future. The year can be characterized as a year of exploring various changes to better respond to student needs.

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[3] Thank you to Dr. Michael Alleman for editing.

[4] The second paper, An Investigation into Longitudinal Retention Rates, is available at: https://www.lsue.edu/institutional-effectiveness/planning/documents/2021RetentionReport.pdf.

[5] The current organizational chart is available at https://www.lsue.edu/faculty-staff/documents/Organizational-Chart.pdf.

[6] The Integrated Learning Center Committee's proposed plan for the Learning Commons report and Digital Literacy are both available online.

Purpose of this Paper

Much the same as the AY 2020-2021 report, this paper focuses on answering questions posed to the Office of Institutional Effectiveness during summer 2022. The basic questions relevant to this paper are the same as last year:

1. What was the overall success rate for students taking courses in AY 2021-2022? How does the success rate for AY 2021-2022 compare to longitudinal success rates including AY 2020-2021?

2. What was the overall withdrawal rate for AY 2021-2022? How does the withdrawal rate for AY 2021-2022 compare to longitudinal withdrawal rates including AY 2020-2021?

3. Are there gaps in success rates among individual student sub-groups? If so, which groups?

The basic questions asked were the same; however, additional questions were asked that focused on specific issues facing LSU Eunice over AY 2022-2023 and 2023-2024. These issues centered on LSU Eunice's work with Achieving the Dream and a new initiative from the Louisiana Board of Regents to eliminate developmental education courses in favor of a co-requisite course model.[7] Both issues placed an additional focus on the completion of the first general education English composition and the first general education mathematics in the first year of attendance. In addition, recent research recommends that students successfully complete 30 credit hours in the initial year of attendance. The metrics for both the completion of general education English composition and mathematics and the successful completion of 30 credit hours in the first year are near term metrics – also known as Early Momentum Metrics. Successfully meeting metrics such as Early Momentum Metrics are essential to increase program completion.[8] As a result, two additional questions were asked related to the Early Momentum Metrics to better inform the LSU Eunice community in making decisions related to the Board of Regents initiative.

4. What was the success and withdrawal rate for Developmental Education and General Education English composition courses?

5. What was the success and withdrawal rate in Developmental Education and General Education Mathematics courses?

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[7] Co-requisite courses are the pairing of a credit bearing general education mathematics and English composition courses with a support course that contains just in time tutoring and instruction to assist students with topics they may find difficult.

[8] Belfield, C. R., Jenkins, D., and Fink, J. (2019). Early Momentum Metrics: Leading Indicators for Community College Improvement. *Community College Research Center*. Available: https://ccrc.tc.columbia.edu/media/k2/attachments/early-momentum-metrics-leading-indicators.pdf

Methodology

This paper utilizes data from LSU Eunice's Office of Institutional Research. The report downloaded the outcome (final grade) for each course taken along with 40 different demographic variables for each student.[9] The data included all methodologies (face-to-face and online) at all LSU Eunice sites regardless of whether the courses met over an 8-week or 16-week session. This data does not include courses offered during the summer or the intersession terms. The course success rates were generated by

$$Success = \left(\frac{frequency\ of\ a\ grade\ of\ A, B, C, or\ P}{Total\ enrollment\ in\ the\ course\ on\ the\ census\ day}\right) * 100^{10}$$

and includes every student enrolled as noted.

Discussion

Answer to Question 1: What is the Overall Success Rate for AY 2021-2022?

The data shown in Table 1 details the results for the 19,657 instances of course-taking by all students enrolled in AY 2021-2022. Overall, 13,979 of the 19,657 instances of course-taking resulted in success with 6,196 earning an A, 4,526 earning a B, 2,996 earning a C, and 261 earning a P (Pass). A grade of D in most cases is not transferrable and/or does not count for degree credit so it was not considered as success. The overall success rate was then calculated as

$$success = \left(\frac{6,196 + 4,526 + 2,996 + 261}{19,657}\right) * 100 = \left(\frac{13,979}{19,657}\right) * 100 = 0.71114 * 100 = 71.1\%.$$

Therefore, the answer to question 1 is 71.1% for all students taking all courses during AY 2021-2022 (see the blue numbers located in the far-right column of Table 1; the 71.1% is within a red circle).

How does the Success Rate Compare to Longitudinal Data?

The success rate was for AY 2021-2022 of 71.1% is 0.9 of a percentage point below the success rate of 72.0% from AY 2020-2021 (see Table 2 and Figure 1). While the success rate declined slightly, the decrease is not necessarily viewed as a negative outcome when considering the *longitudinal* success and withdrawal rates data from AY 2010-2011 through AY 2021-2022 shown in Table 2 and Figure 1. As noted above, the data shows that success rates decreased from 72.0% in AY 2020-2021 to 71.1% in AY 2021-2022; however, this 0.9 percentage point decrease (or a change of 1.3%) is far better than the decrease of 3.2 percentage points (or a change of 4.3%) from 75.2% in AY 2019-2020 to 72.0% in AY 2020-

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[9] Note that the frequencies of course taking and success in those courses are discussed in this paper. While student headcount influences course taking over a particular academic year, it is not discussed. The report for each academic year contains approximately 19,500 records.

[10] The denominator includes all students enrolled in a course on the census day for a given semester. It includes all grades of A, AU, B, C, D, F, P, and NC along with other outcomes such as I, NR, IP, W, and WB (see Table 1).

2021. On the surface, it appears as if the changes made in spring 2022 slowed the decrease in student success rates.

Note that the 71.1% for AY 2021-2022 was 2.8 percentage points below the overall success rate of 73.9% for AY 2010-2011 through AY 2020-2021 shown in the right column of Table 2.[11] In addition, Table 2 and Figure 1 point out that the 71.1% success rate was the second lowest in the twelve-year time span. Both of these points stress the need for continued improvement and additional student support.

Answer to Question 2: What is the Overall Withdrawal Rate for AY 2021-2022?

The answer to question 2 is also found in Table 1. There were 2,239 instances of students withdrawing from the 19,657 instances of course taking (see the "W" column in Table 1). This yields an 11.4% overall withdrawal rate for all courses taken in AY 2021-2022.

Did the withdrawal rate decreased?
Yes:

$$\frac{number\ of\ withdrawals}{total\ instances\ of\ course\ taking} = \frac{2,239\ (see\ \text{Table 1})}{19,657} = .11390 = .11390 * 100 = 11.4$$

The 11.4% withdrawal rate for AY 2021-2022 was slightly less than the success rate of 11.8% from AY 2020-2021 (see Table 2 and Figure 1). This decrease, while small, is much better than the rather dramatic increase from 9.1% in AY 2019-2020 to 11.8% in AY 2020-2021. With that said, the 11.4% withdrawal rate exceeded the overall longitudinal withdrawal rate of 10.3% by 1.1 percentage points. Further, Figure 1 shows that the 11.4% withdrawal rate was the third highest withdrawal rate in the period studied.

Answer to Question 3: Are there Gaps Among Subgroups? If so, which ones?

As noted previously and detailed in Table 1 and Table 2, the overall success rate for AY 2021-2022 was 71.1%. In order to answer question 3, data was broken out by various demographic variables in Table 1. The short answer to question 3 is yes, there appear to be gaps between some demographic groups. This section details each of them.

Success using a grade of A, B, C or P (Pass) for each student group should, in theory, approximate the 71.1%; however, it is statistically unreasonable to expect all student demographic groups to perform at the same rate; some student groups will have greater success while others will not. Toward determining issues related to success using demographic variables, an expected variance of ±5 percentage points from the overall success rate of 71.1% was established as what might be considered as common. The ±5 percentage points establishes a range of acceptable variance between 66.1% to 76.1%. A student success rate below 66.1% may indicate that LSU Eunice should provide additional assistance to help students achieve higher levels of success. Student groups with success rates above the 76.1%

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[11] Data reported in the far-right column of all tables in this paper includes the overall success rates for all students in all courses for AY 2010-2011 through AY 2020-2021. The overall does not include AY 2021-2022 because it is the year under review and is being compared to longitudinal data.

should be evaluated to determine what, if anything, can be learned about a specific group's success that might be applied to the groups that are underperforming.

This section is divided into three sections

- The groups that fall within the expected variance range of 66.1% to 76.1% (not highlighted in Table 1):

- The groups that fall just outside of the expected variance range by a percentage point (highlighted red in Table 1 for those groups below the 66.1% and highlighted purple for those above the 76.1%); and

- The groups that have a large variance from the expected range of 66.1% to 76.1% (highlighted green in Table 1 for groups below the 66.1% and yellow for those above the 76.1)%.

Variance between 66.1% and 76.1%

The following demographic groups in Table 1 had success rates that fell within the accepted variance.

Section B: Gender, with females having a success rate of 71.0% with males at 71.5%.

Section C: Pell Grant Eligibility, with those not eligible having a success rate at 74.6% with those being eligible just within the ±5 percentage points at 66.1%.

Because there was an 8.5 percentage point gap in success between those eligible and those not eligible for a Pell Grant in AY 2021-2022, a longitudinal examination was completed (see Table 3 and Figure 2). The data and the graph indicated that those not Pell eligible (gray line) consistently outperformed those who were Pell eligible (purple line) over the time period studied. As noted in Table 3, the overall historical success rate (without AY 2021-2022) was 73.9%. The data indicated a smaller variance between the overall historical success rate of 73.9% and the those not Pell eligible with a success rate of 77.0% producing a variance of 3.1 percentage points. Students who were Pell eligible had a success rate of 69.5% overall with a variance of 4.4 percentage points.

Section H: Methodology for All Students, with LSU Eunice 8-week online course having the highest success rate at 75.4% and LSU Online course success being the lowest at 68.3%.

Section L: All Part-Time Students, with the success rate for 16-week face-to-face courses being the highest at 74.6% and LSU Online 8-week course success rate being the lowest at 67.5%.

Variance falling just outside the 66.1% and 76.1%

One demographic group had a moderate deviation from the 71.1%, just outside the expected variation. This was Section M: Full Time Students taking LSU Eunice 8-week online courses. Students had a success rate of 76.4% generating a variance of 0.3 percentage points. All other student groups in Section M were within the expected variance of ±5 percentage points.

Groups with Large Variance Below 66.1% or Above 76.1%

Finally, those with large departure from the expected variation included:

Section A: Ethnicity: Several groups performed below well below the expected variance. First, American Indian or Alaska Native students had a success rate of 55.6% with a variance of 15.5 percentage points below the 71.1%. Next, Black (non-Hispanic) students had a success rate of 56.8% with a variance of 14.3 percentage points below the overall success rate. Hispanic of any race students had a success rate of 64.8% with a variance of 6.3 percentage points below overall success rate. In contrast, Asian students had a success rate of 79.9% producing a variance of 8.8 percentage points above the 71.1% and Nonresident Alien students had a success rate of 88.2% with a variance of 17.1 percentage points above the overall success rate.

Because there were so many ethnicities with large variances, a longitudinal examination was conducted on the two largest ethnic groups that took the most of number of courses according to Table 1, this being Black (non-Hispanic) students that took 4,430 courses and White (non-Hispanic) students that took 13,399 courses (see Section A in Table 1).

Table 4 and Figure 3 details the longitudinal data for the success of Black (non-Hispanic and orange data) and White (non-Hispanic and green data) students from AY 2010-2011 through AY 2021-2022. Differences are apparent in Figure 3 as indicated by the separation of the green and orange lines and the degree of separation from the overall success for each year (blue line). For AY 2021-2022, the success rate for Black (non-Hispanic) students was 56.8% while the success rate for White (non-Hispanic) students was 75.9% producing a gap of 19.1 percentage points.

Table 4 also indicates that the overall longitudinal success rate was 73.9% for all students taking all courses (blue data and line). White (non-Hispanic-green data and line) students had a historical success rate of 77.7% just outside the expected variance of by only 1.6 percentage points of 76.1%. In contrast, Black (non-Hispanic-orange data and line) students had a success rate of 62.8% exceeding the expected variance of 66.1% by 3.3 percentage points. This produces a historical gap of 14.9 percentage points.

Note also that Black (non-Hispanic) student success was 64.7% in AY 2019-2020; however, it fell 7.5 percentage points to 57.2% in AY 2020-2021. Nevertheless, in AY 2021-2022, the success rate was 56.8% decreasing just 0.4 percentage points from the 57.2%. While it is difficult to be certain, the changes implemented at the beginning of spring 2022 may have had some positive effect by slowing the decline in the success rate for Black (non-Hispanic) students even though many of the changes had only been partially implemented.

Still, further change is needed as shown by the decrease in success for White (non-Hispanic) students. Table 4 and Figure 3 indicate that the success rate of White (non-Hispanic) students decreased one percentage point from 78.8% in AY 2019-2020 to 77.8% in AY 2020-2021; however, the success rate decreased 1.9 percentage points from 77.8% in AY 2020-2021 to 75.9% in AY 2021-2022.

Section D: For age, the 15-17 age group had a success rate of 88.3% with a variance of 17.2 percentage points above the overall success rate, This is, in part, due to dual enrollment students. Note that 54 17-year-old students were classified as first-time students and that one 16-year-old student and an additional seven 17-year-old students had a blank for classification.

Section E: Athletes students had a success rate of 82.8% with a variance of 11.7 percentage points above the overall success rate.

Section F: Dual Enrollment students had a success rate of 85.4% with a variance of 14.3 percentage points above the 71.1%. This parallels the results from section D but does not match exactly because of the way students are coded (see the results for Section D).

Section G and I: Pathways to Success students had a success rate of 54.3% for AY 2021-2022 with a variance of 16.8 percentage points below the overall success rate (see Table 1).[12] Students in the program had a success rate ranging from 57.7% in 8-week online courses to 53.2% in 16-week online courses with a variance of 13.4 and 17.9 percentage points respectively from the overall success rate of 71.1%.

Table 5 and Figure 4 detail the Pathways students' success rate longitudinally from AY 2010-2011 through present. As noted in Figure 4, the success rate for Pathways students (orange line) has always been below the success of Non-Pathways students (purple line) and the overall (blue line). Figure 4 shows a peak in AY 2017-2018 and a decline lasting through AY 2020-2021. In that time period, there was a 22.5% decline in success falling 15 percentage points from 66.6% in AY 2017-2018 to 51.6% in AY 2020-2021. This decline was reversed when success increased 2.7 percentage points from 51.6% in AY 2020-2021 to 54.3% in AY 2021-2022. This represents a change of 5.2%.

This decline and subsequent reversal is rather important given that 343 (11.2%) of the 3,064 of the students attending LSU Eunice in fall 2021 were Pathways to Success students. Of the 343 students in Pathways, 170 (49.6%) were Black (non-Hispanic) while 135 (39.4%) were White (non-Hispanic). There is a correlation between the success of the Pathways to Success students in Sections G and I and the Black (non-Hispanic) students in Section A due to the demographic makeup of the students in the Pathways to Success program. Stated simply, increasing the success of Pathways to Success students will also increase the success of Black (non-Hispanic) students. The converse is also true: increasing the success of Black (non-Hispanic) students will also increase the success rates in the Pathways to Success program.

Section J: Classification: Two student groups had a large variance above the 71.1%: Dual Enrollment and Unclassified students, with success rates of 89.9% and 83.0% producing a variance of 18.8 and 11.9 percentage points respectively. Groups underperforming were First-Time Students, with a success rate of 62.0%, Returning Freshmen at 61.5%, and Unclassified Transfer at 56.5%, producing variances of 9.1, 9.6, and 14.6 percentage points respectively.

Table 6 and Figure 5 expand on this data, showing that freshmen, whether they be new (gray data and line) or returning (purple data and line), need additional assistance to be successful since both groups have consistently performed below the overall success (dark blue data and line).

Table 6 showing the longitudinal data from AY 2010-2011 through AY 2021-2022 also indicated that the overall success rate of new first-time students (gray data) is 67.2%, this

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[12] Pathways to Success students are placed in the program because they are underprepared in all subjects requiring developmental education courses in mathematics, English composition, and reading.

being 6.7 percentage points below the overall success rate of 73.9%. Further, the data indicated that the success rate of new first-time students for AY 2021-2022 of 62.0% was below the longitudinal average of 67.2%. The same can be said for returning freshmen because their overall success rate of 66.1% was 7.8 percentage points below the overall of 73.9%. Their success rate for AY 2021-2022 of 61.5% was also below their longitudinal overall success rate of 66.1%. Increasing success rates with freshmen students will no doubt increase retention and completion.

Section K: New First-Time Students Only had a success rate of 62.0% having a variance of 9.1 percentage points below the 71.1%. The largest variance was produced by students taking LSU Online courses. These students had a success rate of 51.9%, producing a variance of 19.2 percentage points from the overall success rate of 71.1%.

In summary, the answer to question three is yes. There appear to be gaps in success rates of marginalized populations such as Black (non-Hispanic) and American Indian or Alaska Native students. In addition, the data indicated that Pathways to Success, while improving, still needs additional assistance. Finally, new first-time students and returning freshmen also need assistance. Note that these groups are all interrelated and contain many of the same students.

Answer to Question 4: What is the success and withdrawal rate for Developmental Education and General Education English composition courses?
Table 7 and Figure 6 detail the longitudinal success rates for developmental and general education English composition courses and answer the first part of Question 4.

Developmental English Composition
First, 367 (59.0%) of the 622 students registered for developmental English composition (ENGL 0001) during AY 2021-2022 successfully completed the course with an A, B, C or P (see orange data and line). Institutional research data indicated that 55 (8.8%) of the 622 students withdrew.

The data also indicated that the 59.0% completion rate for ENGL 0001 during AY 2021-2022 was the lowest and falls well below the overall success rate of 70.4% for developmental English composition from AY 2010-2011 through AY 2020-2021 (see orange data in Table 7 and orange line in Figure 6). According to the data, success in ENGL 0001 reached a peak of 79.5% in AY 2017-2018 and decreased 20.5 percentage points (for a change of 25.8%) to 59.0% in AY 2021-2022. In addition, the overall success rate (blue line) decreased 4.5 percentage points (for a change of 6.0%) since AY 2017-2018 as shown by the negatively sloped line; however, the success rate for ENGL 0001 decreased at a much greater rate since AY 2017-2018 (25.8% versus 6.0%).

General Education English Composition
For AY 2021-2022, 781 (73.1%) of the 1,068 students who registered for general education English composition (ENGL 1001) successfully completed the course with an A, B, C or P (see gray data and line). Institutional research data indicated that 95 (8.9%) of the 1,068 students withdrew.

The gray data in Table 7 and line in Figure 6 shows a decrease in success in general education English composition (ENGL 1001) from a peak of 78.9% in AY 2016-2017 to 73.1% for AY

2021-2022, representing a 5.8 percentage point decrease (for a change of 7.4%) in six academic years. The 73.1% from AY 2021-2022 is 2.0 percentage points below the overall success rate of 75.1% for ENGL 1001 for AY 2010-2011 through AY 2020-2021. The decrease in success has occurred at almost the same rate as the overall success rate represented by the blue line (7.4% for ENGL 1001 versus 6.0% for the overall).

Answer to Question 5: What is the success and withdrawal rate in Developmental Education and General Education Mathematics courses?
Table 8 and Figure 7 show the longitudinal success rates for developmental education mathematics courses.

Developmental Mathematics
For Pre-Algebra (MATH 0001), 398 (44.9%) of the 887 students enrolled during AY 2021-2022 successfully completed the course with an A, B, C or P (see orange data and line). Institutional research data indicated that 110 (12.4%) of the 887 students withdrew. Student success in MATH 0001 decreased from a peak of 79.9% in AY 2013-2014 to 44.9% in AY 2021-2022 representing a 35 percentage point decrease (for a change of 43.8%). Note that the 44.9% from AY 2021-2022 is the lowest success rate during the period studied and is 11.3 percentage points below overall for AY 2010-2011 through AY 2020-2021.

For Introductory Algebra (MATH 0002/MATH 0015), 178 (44.0%) of the 405 students registered during AY 2021-2022 successfully completed the course with an A, B, C or P (see gray data and line).[13] Institutional research data indicated that 81 (20.0%) of the 405 students withdrew. The 44.0% from AY 2021-2022 is a difference of 10.2 percentage points (for a change of 18.8%) from a peak of 54.2% in AY 2014-2015. The 44.0% is 6.0 percentage points below the overall of 50.0% for the AY 2010-2011 through AY 2020-2021 time period.

For Intermediate Algebra (MATH 0021), 74 (48.1%) of the 154 students registered during AY 2021-2022 successfully completed the course with an A, B, C or P (see purple data and line). Institutional research data indicated that 30 (19.5%) of the 154 students withdrew. The success rate for MATH 0021 was 48.8% when it was first offered in AY 2017-2018, it increased to 53.6% in AY 2019-2020, but then it decreased to 48.1% for AY 2021-2022. The success rate for AY 2021-2022 of 48.1% is one percentage point below the 49.1% for AY 2017-2018 through AY 2020-2021.

While there was a degree of success when modular mathematics was introduced in fall 2013, Table 8 and Figure 7 shows the reality related to the student performance in developmental mathematics. Simply put, the combined overall success for developmental mathematics decreased 21.1 percentage points (for a change of 31.9%) from 66.1% in AY 2013-2014 to 45.0% in AY 2021-2022 (see green data in Table 8 and Figure 7). The decline in success for developmental mathematics versus all courses taken is illustrated in Figure 7.[14] The difference in the combined success rates for developmental mathematics (green line) versus the overall success rate for all courses (blue) is also apparent in Figure 7. In AY 2013-2014, the gap was

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[13] Note that from AY 2010-2011 through AY 2016-2017, MATH 0015 and MATH 0021 were taught as a single course (MATH 0002). The data for the MATH 0002 course is shown with the MATH 0015 data.
[14] See orange line for MATH 0001, gray line for MATH 0002/MATH 0015, and purple line for MATH 0021 versus the blue line for overall success for all courses taken.

8.7 percentage points; however, the gap increased to 26.1% percentage points, with the overall for all developmental mathematics courses being 45.0% and the overall for all courses being 71.1% in AY 2021-2022.

General Education Mathematics (College Algebra)

Finally, Table 9 and Figure 8 detail the longitudinal success rates for all three entry level General Education Mathematics courses. Applied College Algebra (MATH 1015), meant mostly for non-STEM fields, is shown using the orange data in Table 9 and line in Figure 8. Success reached a peak of 65.8% in AY 2017-2018 falling 11.3 percentage points (for a change of 17.2%) to 54.5% in AY 2021-2022. As noted in Table 9, the 54.5% is 5.7 percentage points below the overall from AY 2013-2014 through AY 2020-2021. Students taking MATH 1015 typically take Elementary Statistics (MATH 1425) to complete their math requirements for the Associate Degree.

Next, data is detailed for the two College Algebra courses. MATH 1020 is represented by the gray data and line and MATH 1021 is represented by the purple data and line in Table 9 and Figure 8. MATH 1021 is the typical three-hour version of College Algebra for "college ready" students while MATH 1020 is a five-hour version designed for students scoring just below the "college ready" cut score on the placement test. Both courses award three credits for the College Algebra; however, the MATH 1020 course has two additional credits that allow for time for topics students may find especially difficult. Students taking MATH 1020 or 1021 typically then typically take Plane Trigonometry (MATH 1022) and more advance mathematics courses depending on their degree requirements.

MATH 1020 has been offered intermittently, first in AY 2012-2013, then in AY 2017-2018, and then AY 2019-2020 through the present. Results have fluctuated as indicated by the gray data in Table 9 and line in Figure 8; however, the success rate for AY 2021-2022 was 66.7%, this being 3.6 percentage points above the overall longitudinal success rate of 63.1%.

The success rates for MATH 1021 have also fluctuated in the 50s and low 60s during the period studied (see the purple data in Table 9 and line in Figure 8). The highest success rate of 61.9% was achieved in AY 2014-2015, with results decreasing and then increasing to 60.9% in AY 2017-2018. From the peak of 61.9% to the 50.8% in AY 2021-2022, there was a decrease in success of 11.1 percentage points (for a change of 17.9%). The 50.8% success rate from AY 2021-2022 was 5.2 percentage points below longitudinal overall of 56.0% from AY 2010-2011 through AY 2020-2021. The 50.8% was also the lowest in the time period studied.

The combined success rates from all three College Algebra courses is indicated by the green data in Table 9 and line in Figure 8. The combined data indicates a success rate for the three courses that is mostly in the 50s breaking through to the low 60s in AY 2014-2015 and AY 2017-2018. The success rate of 57.2% for AY 2021-2022 is 0.8 of a percentage point below the longitudinal success rate of 58.0% from AY 2010-2011 through AY 2020-2021. In addition, the longitudinal success rates for College Algebra shown by the green data in Table 9 and line in Figure 8 are substantially below the overall success rates for all courses shown by the blue data and line, with the longitudinal overalls in the far right of Table 9 differing by 15.9 percentage points.

A Final Comment

This paper has presented an interpretation of the data without speculating on the reasons why the various trends are occurring. There is no doubt that the pandemic impacted student success; however, many downward trends began prior to that event. The question of why is left for the Chancellor's Cabinet, the Achieving the Dream Core Team, and the faculty. Recommendations for improvement will come from those bodies. Given these downward trends, the data suggests that further change is needed.

Questions on this report may be directed to Dr. Paul Fowler, Director of Institutional Effectiveness and Accreditation at pfowler@lsue.edu.

Table 1. AY 2021-2022 LSU Eunice Overall Success Rates – All students in all courses.

A. Ethnicity	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
American Indian or Alaska Native	45		25	9	4	24				2		33		142	55.6
Asian	72		41	18	5	9				1		18		164	79.9
Black (non-Hispanic)	864		848	781	298	958	5		12	18	25	621		4430	56.8
Hispanic of any race	130		111	80	30	67				2	5	78		503	64.8
Native Hawaiian or Other Pacific				1		1								2	50.0
Nonresident Alien	56		18	8		9						2		93	88.2
Race/Ethnicity Unknown	163		118	60	22	37			3	2	2	51		458	74.9
Two or more races	163		95	67	17	60	1				1	62		466	70.0
White (non-Hispanic)	4703	1	3270	1972	599	1130	15	1	27	79	228	1374		13399	75.9
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

B. Gender	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
F	4508		3351	2242	749	1654	18		41	84	227	1680		14554	71.0
M	1688	1	1175	754	226	641	3	1	1	20	34	559		5103	71.5
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

C. Pell Grant Recipient?	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
N	4192	1	2729	1647	504	1121	8	1	20	104	156	1219		11702	74.6
Y	2004		1797	1349	471	1174	13		22		105	1020		7955	66.1
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

D. Age	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
15-17	749		350	166	38	47	2					81		1433	88.3
18-24	4246		3185	2221	771	1845	17	1	15	51	157	1694		14203	69.1
25 and greater	1201	1	991	609	166	403	2		27	53	104	464		4021	72.2
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

E. Athlete?	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
N	5508	1	4275	2820	919	2240	21	1	42	104	261	2119		18311	70.3
Y with sports participation courses	688		251	176	56	55						120		1346	82.8
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

F. Dual Enrollment?	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
N	4373	1	3593	2485	864	2152	15	1	38	92	220	1951		15785	67.6
Y	1823		933	511	111	143	6		4	12	41	288		3872	85.4
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

G. Pathways to Success?	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
N	5846	1	4075	2644	840	1736	20	1	42	104	261	1964		17534	73.1
Y	350		451	352	135	559	1					275		2123	54.3
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

H. Method	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
LSUE 8-week online	433		237	132	49	141						71		1063	75.4
16-week face-to-face	3354	1	2719	1921	567	1159	11	1	41	104	261	1363		11502	71.8
All LSUE/O 16-week online	1947		1255	790	295	771	10		1			661		5730	69.7
LSUO 8-week online	462		315	153	64	224						144		1362	68.3
Grand Total	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

I. Pathways to Success Only	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
8-week online	12		11	7	3	15						4		52	57.7
16-week face-to-face	304		390	306	110	491	1					238		1840	54.3
16-week online	34		50	39	22	53						33		231	53.2
Grand Total	350	0	451	352	135	559	1	0	0	0	0	275	0	2123	54.3

J. Classification	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
blank	16		18	12	2	7				1		9		65	70.8
First-time Students	939		794	584	226	726	6		1		1	461		3738	62.0
Freshmen Returning	1479		1219	924	349	1034	7		2	1	5	875		5895	61.5
Dual Enrollment[15]	1087		502	226	47	46	2					109		2019	89.9
Sophomore	1592	1	1016	743	231	304	1		12	36	70	540		4546	75.3
Unclassified	1023		929	477	109	114	5	1	27	62	184	217		3148	83.0
Unclassified Transfer	60		48	30	11	64				4	1	28		246	56.5
	6196	1	4526	2996	975	2295	21	1	42	104	261	2239	0	19657	71.1

K. New First-Time Students Only	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
LSUE 8-week online	41		31	17	9	29						15		142	62.7
16-week face-to-face	683		550	407	145	422	4				1	280		2492	65.9
LSUE/O 16-week online	179		159	140	62	206	2		1			143		892	53.6
LSUO 8-week online	36		54	20	10	69						23		212	51.9
Grand Total	939	0	794	584	226	726	6	0	1	0	1	461	0	3738	62.0

L. All Part-Time Students (registered < 12 hrs)	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
LSUE 8-week online	135		68	26	15	46						23		313	73.2
16-week face-to-face	1010	1	930	702	172	290	2	1	31	104	258	386		3887	74.6
LSUE/O 16-week online	604		468	286	91	301	1		1			230		1982	68.5
LSUO 8-week online	165		114	56	24	89						48		496	67.5
Grand Total	1914	1	1580	1070	302	726	3	1	32	104	258	687	0	6678	72.2

M. All Full-Time Students (registered ≥ 12 hrs)	A	AU	B	C	D	F	I	IP	NC	NR	P	W	WB	Grand Total	Percent Success
LSUE 8-week online	298		169	106	34	95						48		750	76.4
16-week face-to-face	2344		1789	1219	395	869	9		10		3	977		7615	70.3
LSUE/O 16-week online	1343		787	504	204	470	9					431		3748	70.3
LSUO 8-week online	297		201	97	40	135						96		866	68.7
Grand Total	4282	0	2946	1926	673	1569	18	0	10	0	3	1552	0	12979	70.6

[15] Note that this row reflects dual enrollment students with a classification of PR only.

Table 2. Longitudinal success and withdrawal rates.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	15350	14570	14512	13165	13092	12764	14301	15077	15721	15006	14950	13979	158508
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n withdrawal	2349	2092	1938	1699	1733	1688	1968	1903	2541	1808	2456	2239	22175
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Withdrawal-all courses	10.8	10.5	9.9	9.7	9.9	9.9	10.3	9.5	11.9	9.1	11.8	11.4	10.3

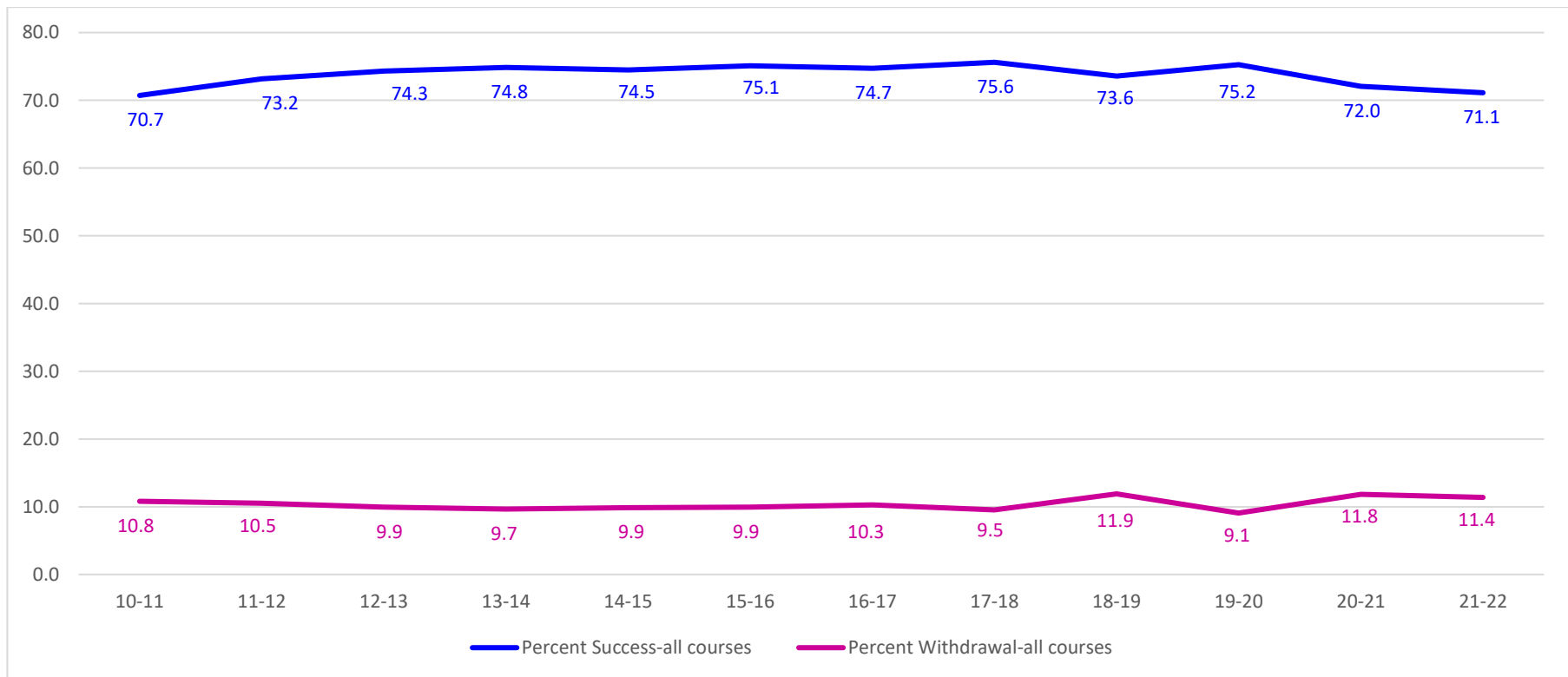Figure 1. Longitudinal success and withdrawal rates.

Table 3. Longitudinal success rate data (as a percentage) by Pell eligibility.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	8866	8362	8437	7787	7378	7319	8219	8871	8944	8572	8858	8724	100337
Total n course-taking	11895	10867	10891	9878	9469	9470	10579	11288	11563	11109	11575	11702	130286
Pell Grant Eligible = N	74.5	76.9	77.5	78.8	77.9	77.3	77.7	78.6	77.4	77.2	76.5	74.6	77.0
Total n success	6484	6208	6075	5378	5714	5445	6082	6206	6777	6434	6092	5255	72150
total n course-taking	9811	9050	8640	7712	8105	7526	8561	8652	9800	8833	9175	7955	103820
Pell Grant Eligible = Y	66.1	68.6	70.3	69.7	70.5	72.3	71.0	71.7	69.2	72.8	66.4	66.1	69.5
Total n success	15350	14570	14512	13165	13092	12764	14301	15077	15721	15006	14950	13979	158508
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

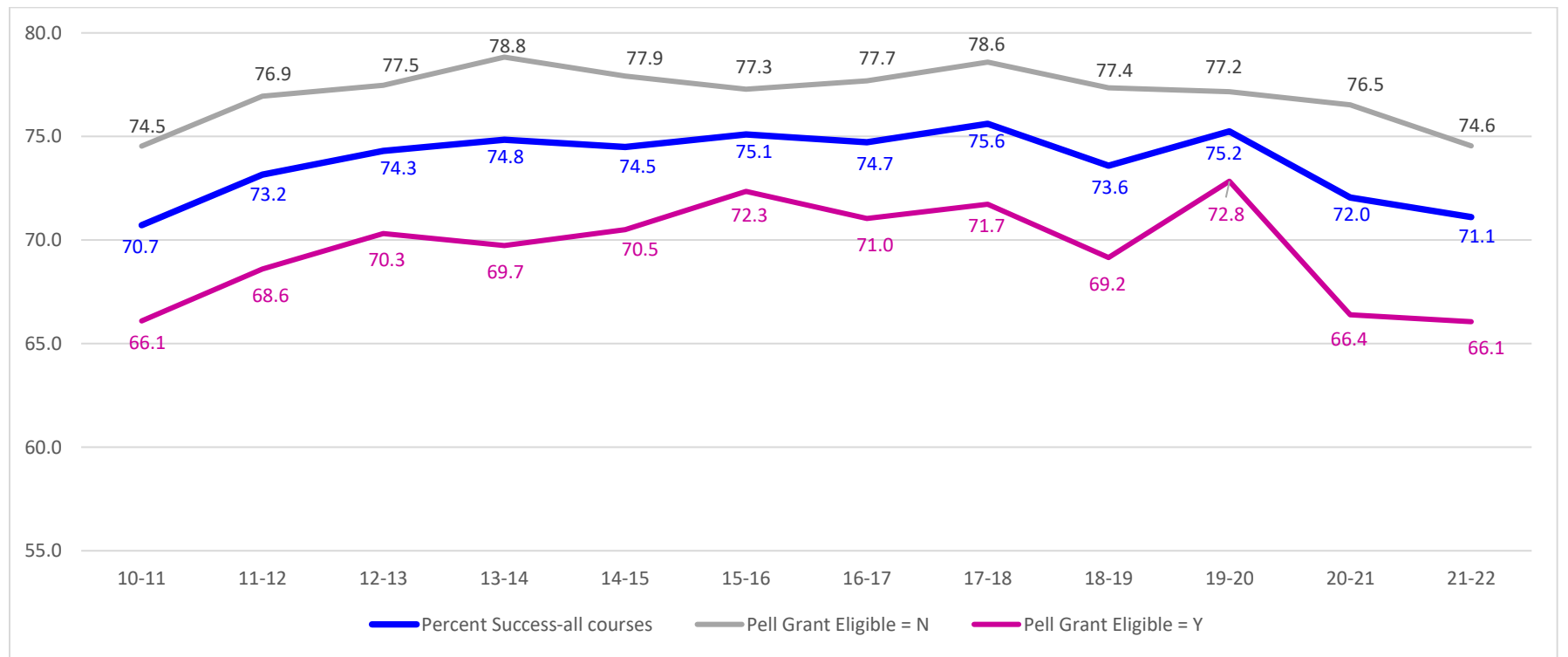Figure 2. Longitudinal success rate data (as a percentage) by Pell eligibility.

Table 4. Longitudinal success rate data (as a percentage) by two largest ethnicities.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	3300	3180	2850	2475	2829	2672	3038	2978	3055	2838	2937	2518	32152
Total n course-taking	5489	5197	4489	3972	4325	4067	4647	4482	5039	4384	5138	4430	51229
Black (non-Hispanic)	60.1	61.2	63.5	62.3	65.4	65.7	65.4	66.4	60.6	64.7	57.2	56.8	62.8
Total n success	11040	10544	10872	10005	9512	9340	10405	11043	11305	10717	10642	10173	125598
Total n course-taking	14839	13566	13925	12698	12203	11872	13337	14001	14510	13608	13680	13399	161638
White (non-Hispanic)	74.4	77.7	78.1	78.8	77.9	78.7	78.0	78.9	77.9	78.8	77.8	75.9	77.7
Total n success	15350	14570	14512	13165	13092	12764	14301	15077	15721	15006	14950	13979	158508
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Figure 3. Longitudinal success rate data (as a percentage) by two largest ethnicities.
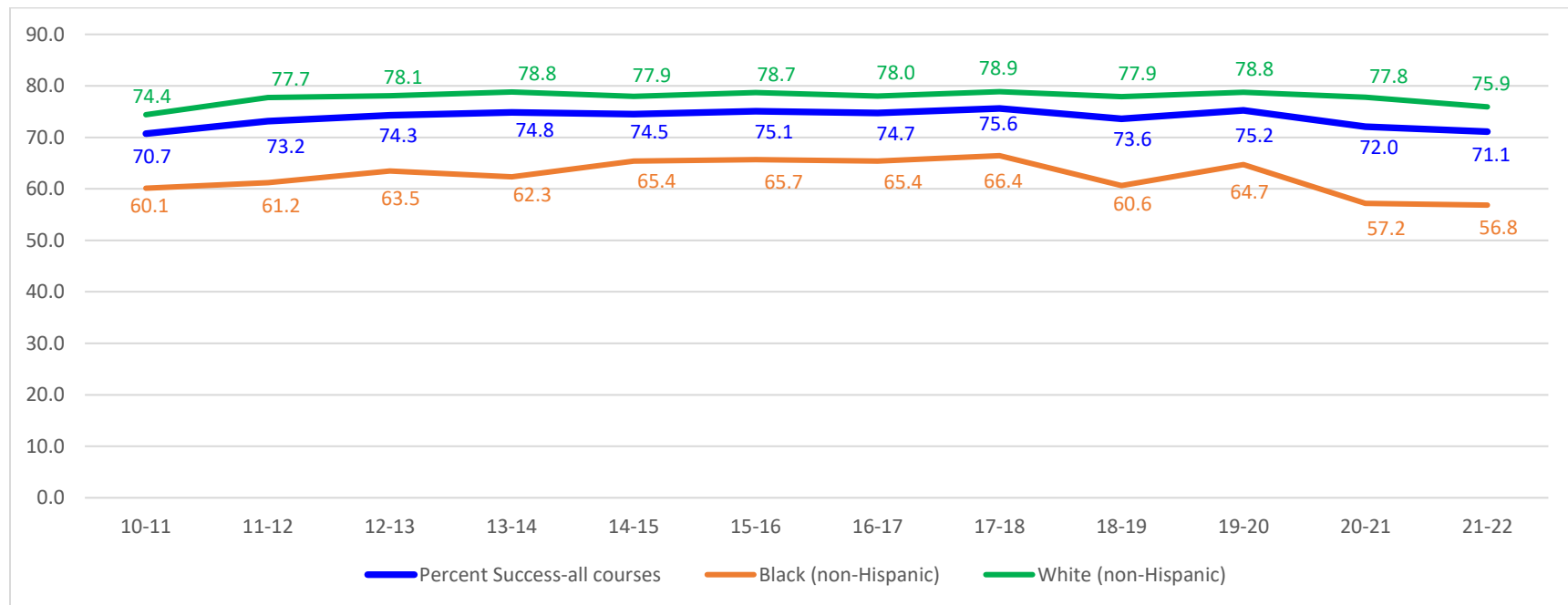
Table 5. Longitudinal success rate data (as a percentage) by Pathways to Success classification.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	1812	1865	1534	1457	1440	1208	1210	1325	1432	1147	1312	1153	15742
Total n course-taking	3112	3007	2474	2251	2309	1867	1897	1988	2311	1940	2542	2123	25698
Pathways to Success = Y	58.2	62.0	62.0	64.7	62.4	64.7	63.8	66.6	62.0	59.1	51.6	54.3	61.3
Total n success	13538	12705	12978	11708	11652	11556	13091	13752	14289	13859	13638	12826	155592
total n course-taking	18594	16910	17057	15339	15265	15129	17243	17952	19052	18002	18208	17534	206285
Pathways to Success = N	72.8	75.1	76.1	76.3	76.3	76.4	75.9	76.6	75.0	77.0	74.9	73.1	75.4
Total n success	15350	14570	14512	13165	13092	12764	14301	15077	15721	15006	14950	13979	158508
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Figure 4. Longitudinal success rate data (as a percentage) by Pathways to Success classification.
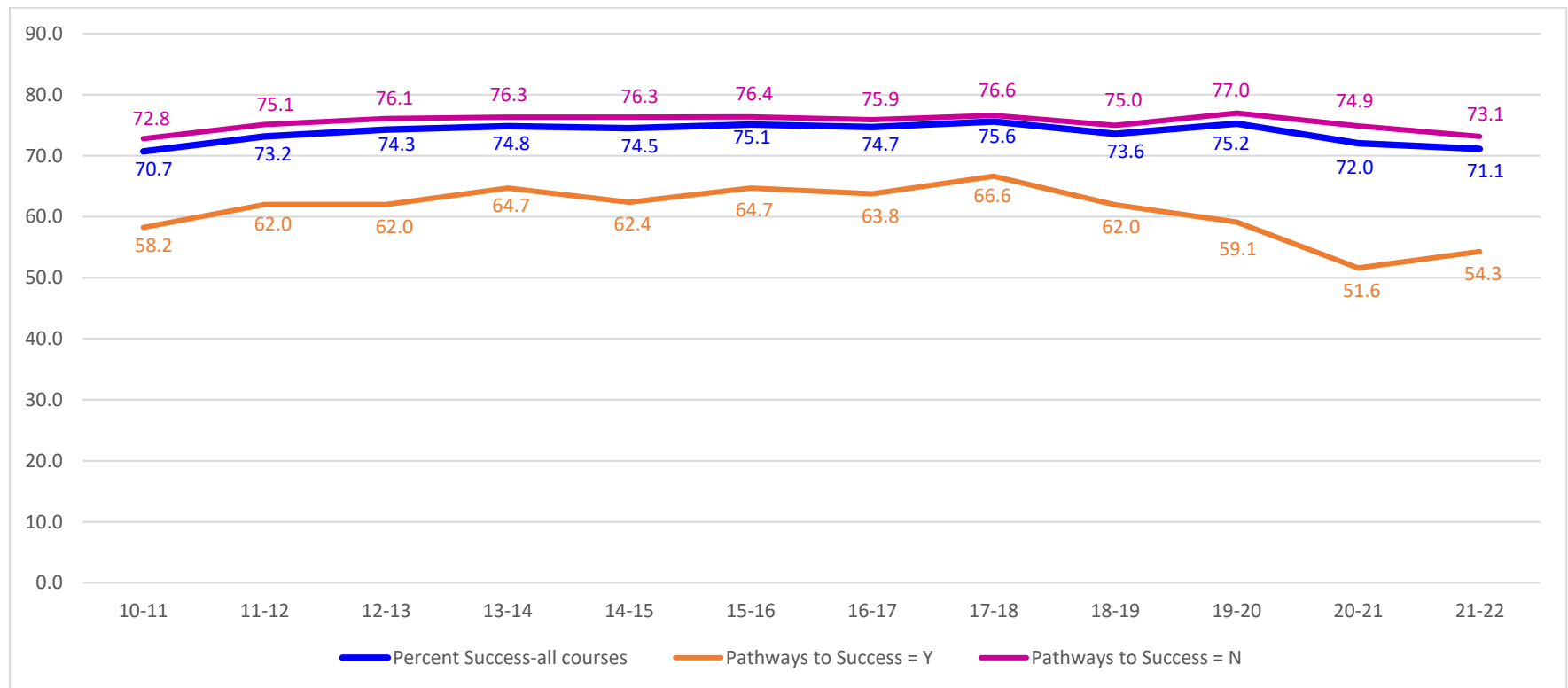
Table 6. Longitudinal success rate data (as a percentage) by student classification.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	3	0	11	6	11	19	20	23	15	6	27	46	141
Total n course-taking	8	7	17	47	49	21	25	49	30	16	56	65	325
No Classification	37.5	0.0	64.7	12.8	22.4	90.5	80.0	46.9	50.0	37.5	48.2	70.8	43.4
Total n success	2698	2572	2447	2294	2472	2462	2833	2719	2871	2393	2649	2318	28410
Total n course-taking	4183	3881	3586	3234	3645	3461	4060	3829	4408	3752	4208	3738	42247
First-time students	64.5	66.3	68.2	70.9	67.8	71.1	69.8	71.0	65.1	63.8	63.0	62.0	67.2
Total n success	4767	4635	4375	4068	3974	3801	4072	4228	4169	4102	3844	3627	46035
Total n course-taking	7549	6968	6669	5960	5792	5732	6171	6296	6460	5970	6041	5895	69608
Returning Freshmen	63.1	66.5	65.6	68.3	68.6	66.3	66.0	67.2	64.5	68.7	63.6	61.5	66.1
Total n success	1335	1032	1132	702	773	825	1551	1721	1569	1504	1768	1815	13912
Total n course-taking	1399	1085	1173	721	806	867	1608	1964	1705	1670	1982	2019	14980
Dual Enrollment	95.4	95.1	96.5	97.4	95.9	95.2	96.5	87.6	92.0	90.1	89.2	89.9	92.9
Total n success	3879	3797	3563	3330	3551	3396	3358	3432	3986	4003	3684	3421	39979
total n course-taking	5132	4831	4550	4379	4542	4223	4324	4310	5121	5030	4912	4546	51354
Sophomore	75.6	78.6	78.3	76.0	78.2	80.4	77.7	79.6	77.8	79.6	75.0	75.3	77.8
Total n success	2387	2249	2536	2466	2147	2134	2262	2724	2798	2811	2873	2613	27387
Total n course-taking	2994	2710	2920	2859	2492	2482	2624	3083	3175	3210	3380	3148	31929
Unclassified	79.7	83.0	86.8	86.3	86.2	86.0	86.2	88.4	88.1	87.6	85.0	83.0	85.8
Total n success	281	285	448	299	164	127	205	230	313	187	105	139	2644
Total n course-taking	441	435	616	390	248	210	328	409	464	294	171	246	4006
Unclassified Transfer	63.7	65.5	72.7	76.7	66.1	60.5	62.5	56.2	67.5	63.6	61.4	56.5	66.0
Total n success	15350	14570	14512	13165	13092	12764	14301	15077	15721	15006	14950	13979	158508
Total n course-taking	21706	19917	19531	17590	17574	16996	19140	19940	21363	19942	20750	19657	214449
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Figure 5. Longitudinal success rate data (as a percentage) by student classification.
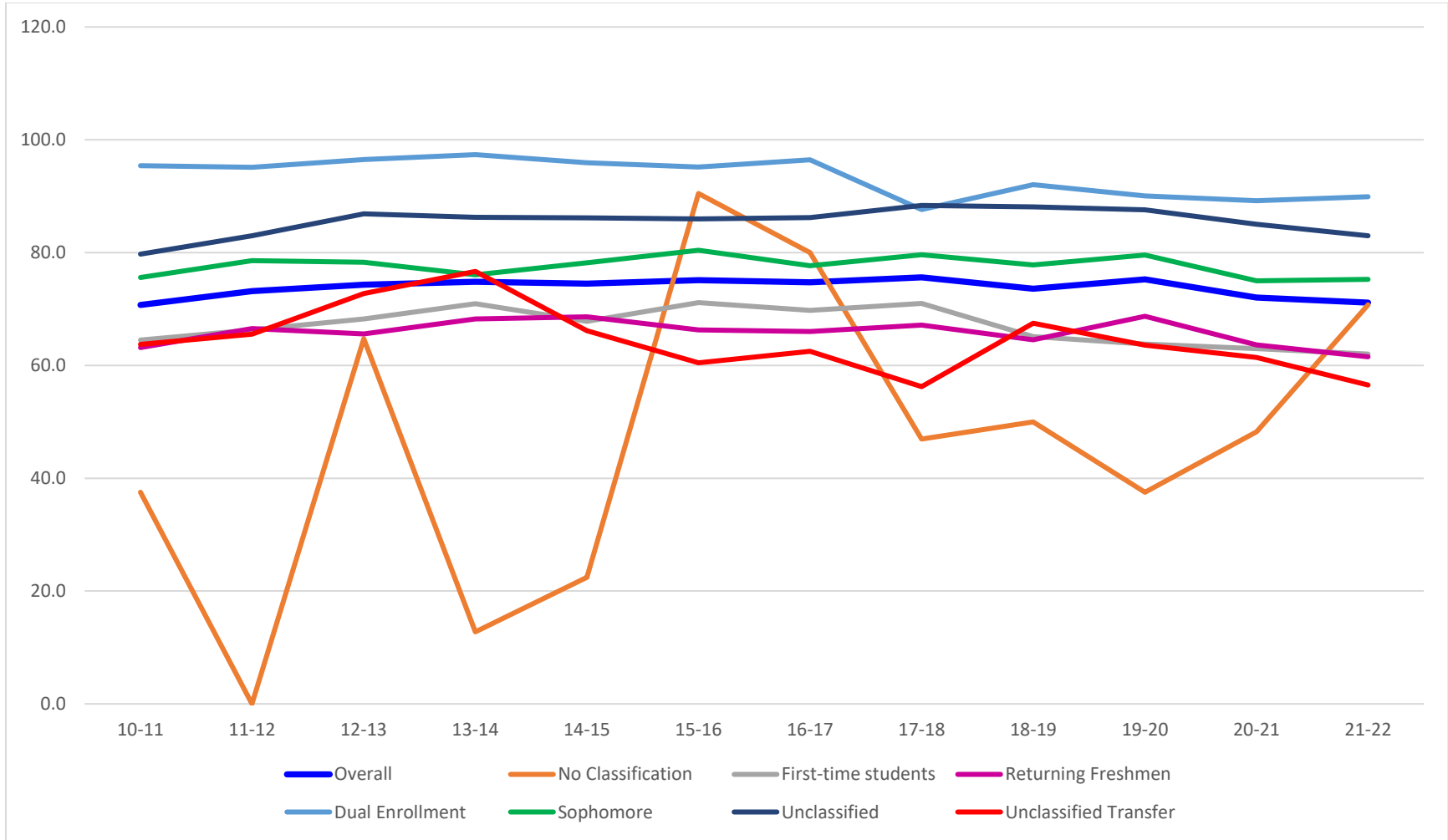
Table 7. Longitudinal success rate data (as a percentage) in developmental and general education English composition.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	524	447	432	364	385	346	404	416	399	336	425	367	4478
Total n course-taking	726	705	605	510	559	484	528	523	560	495	666	622	6361
Dev English (ENGL 0001)	72.2	63.4	71.4	71.4	68.9	71.5	76.5	79.5	71.3	67.9	63.8	59.0	70.4
Total n success	880	828	871	774	697	738	1110	1014	832	765	782	781	9291
Total n course-taking	1271	1168	1097	984	961	946	1407	1322	1112	1044	1066	1068	12378
GE English (ENGL 1001)	69.2	70.9	79.4	78.7	72.5	78.0	78.9	76.7	74.8	73.3	73.4	73.1	75.1
Total n success	1404	1275	1303	1138	1082	1084	1514	1430	1231	1101	1207	1148	13769
Total n course-taking	1997	1873	1702	1494	1520	1430	1935	1845	1672	1539	1732	1690	18739
Overall Success for English	70.3	68.1	76.6	76.2	71.2	75.8	78.2	77.5	73.6	71.5	69.7	67.9	73.5
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Figure 6. Longitudinal success rate data (as a percentage) in developmental and general education English composition.
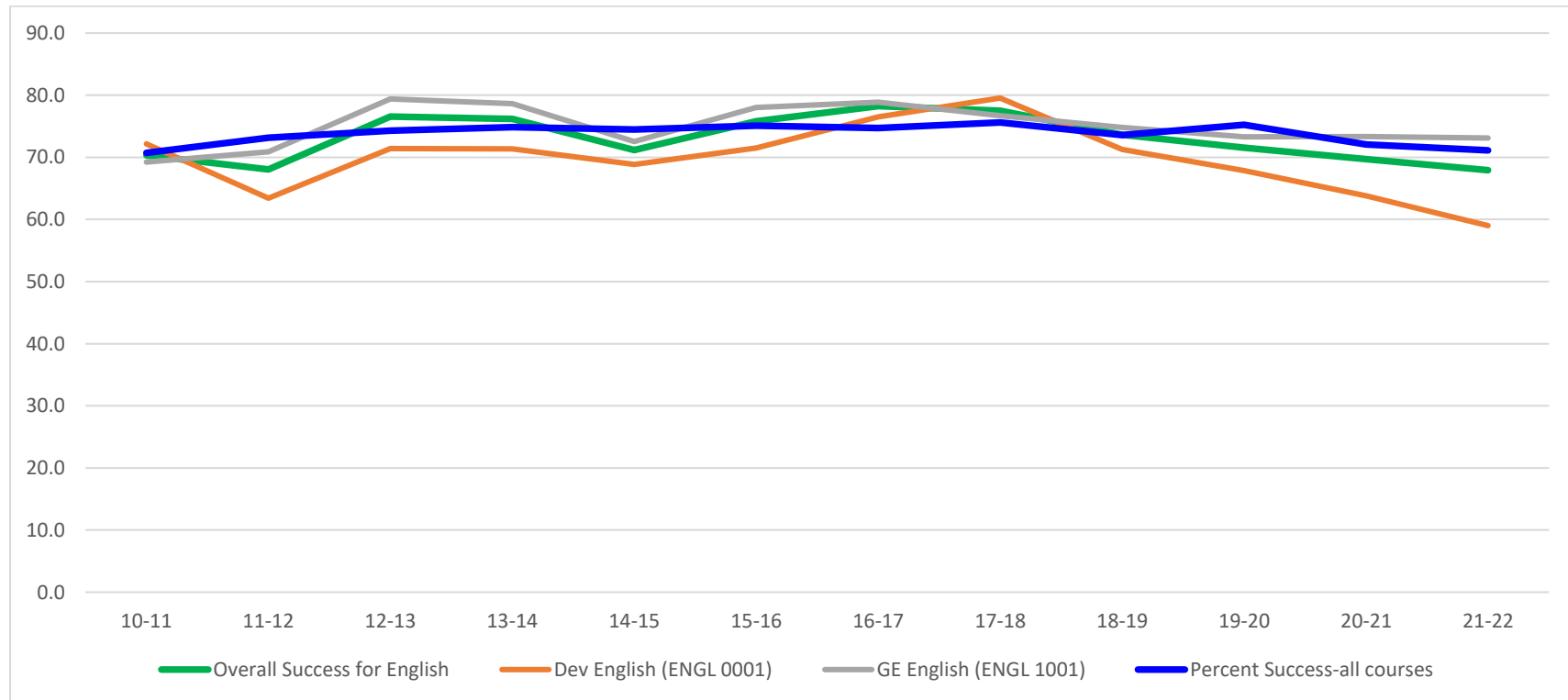
Table 8. Longitudinal success rate data (as a percentage) in developmental mathematics.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success	552	572	477	521	426	376	482	466	467	357	466	398	5162
Total n course-taking	1123	1022	815	652	672	618	822	841	874	770	973	887	9182
Pre-Algebra (MATH 0001)	49.2	56.0	58.5	79.9	63.4	60.8	58.6	55.4	53.4	46.4	47.9	44.9	56.2
Total n success	370	369	319	349	343	312	346	182	201	196	181	178	3168
Total n course-taking	826	731	695	664	633	599	659	400	381	374	377	405	6339
Introductory Algebra (MATH 0015)[16]	44.8	50.5	45.9	52.6	54.2	52.1	52.5	45.5	52.8	52.4	48.0	44.0	50.0
Total n success								147	174	199	122	74	642
Total n course-taking								301	386	371	250	154	1308
Intermediate Algebra (MATH 0021)								48.8	45.1	53.6	48.8	48.1	49.1
Total n success	922	941	796	870	769	688	828	795	842	752	769	650	8972
Total n course-taking	1949	1753	1510	1316	1305	1217	1481	1542	1641	1515	1600	1446	16829
Overall Developmental Mathematics	47.3	53.7	52.7	66.1	58.9	56.5	55.9	51.6	51.3	49.6	48.1	45.0	53.3
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

[16] Note that from AY 2010-2011 through AY 2016-2017, MATH 0015 and MATH 0021 were taught as a single course (MATH 0002) and this data is shown in the MATH 0015 line.

Figure 7. Longitudinal success rate data (as a percentage) in developmental mathematics.
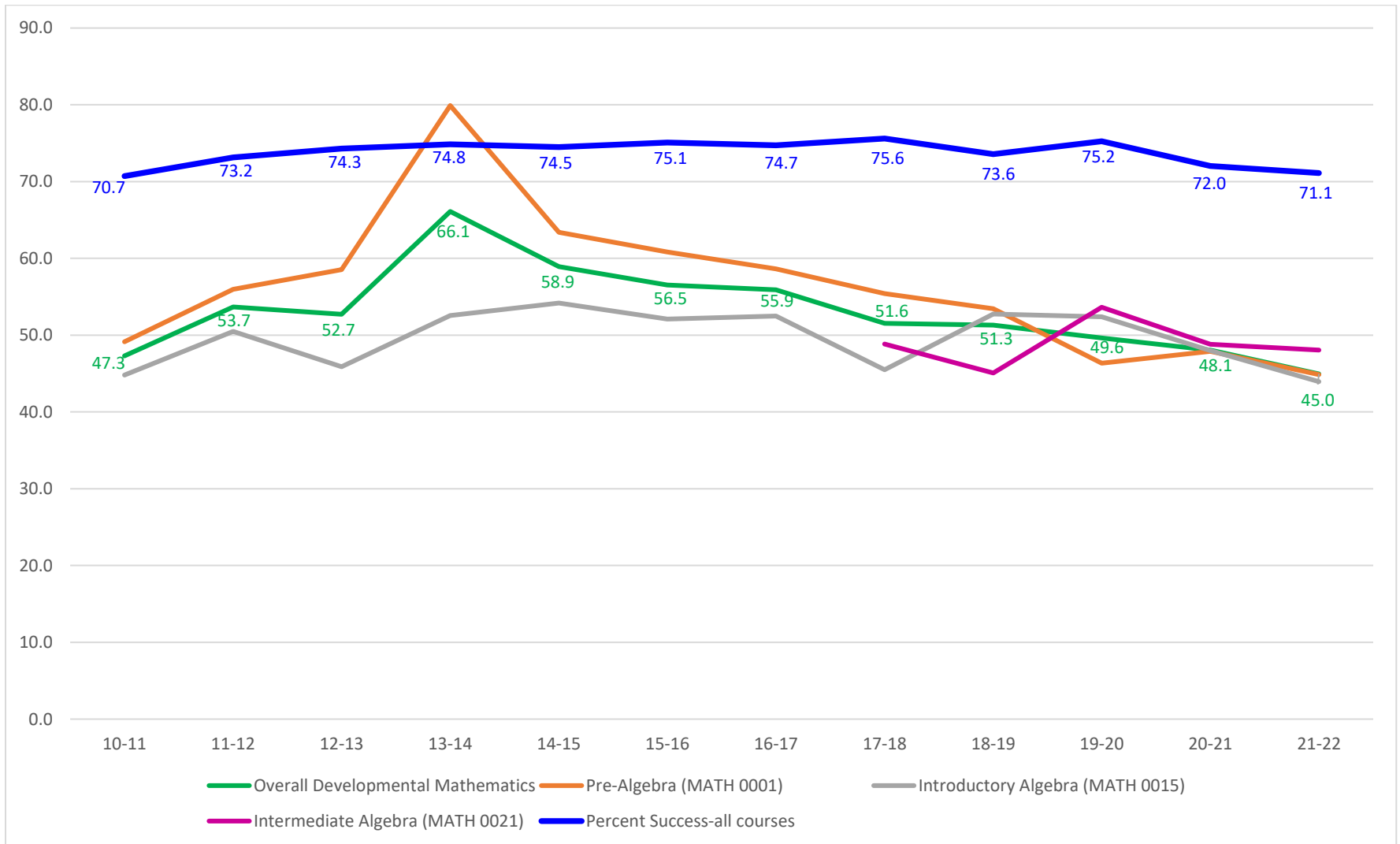
Table 9. Longitudinal success rate data (as a percentage) in College Algebra.

Description/Academic Year	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	n (10-11 - 20-21)
Total n success				267	291	259	240	283	285	221	236	240	2322
Total n course-taking				433	482	402	383	430	451	392	444	440	3857
MATH 1015				61.7	60.4	64.4	62.7	65.8	63.2	56.4	53.2	54.5	60.2
Total n success			22					30		138	129	164	483
Total n course-taking			28					46		225	221	246	766
MATH 1020			78.6					65.2		61.3	58.4	66.7	63.1
Total n success	484	516	565	232	304	262	322	283	306	132	120	92	3618
Total n course-taking	949	942	968	405	491	485	559	465	554	240	225	181	6464
MATH 1021	51.0	54.8	58.4	57.3	61.9	54.0	57.6	60.9	55.2	55.0	53.3	50.8	56.0
Total n success	484	516	587	499	595	521	562	596	591	491	485	496	5927
Total n course-taking	949	942	996	838	973	887	942	941	1005	857	890	867	10220
Overall	51.0	54.8	58.9	59.5	61.2	58.7	59.7	63.3	58.8	57.3	54.5	57.2	58.0
Percent Success-all courses	70.7	73.2	74.3	74.8	74.5	75.1	74.7	75.6	73.6	75.2	72.0	71.1	73.9

Figure 8. Longitudinal success rate data (as a percentage) in College Algebra.