Academic Support Centers Assessment Report
Fall 2016
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1 INTRODUCTION

Florida SouthWestern's Academic Support Center (ASC) employs a series of assessments in order to support and strengthen the capabilities of each center (writing, math, and peer tutoring) in providing assistance in student achievement of the General Education competencies. Student learning centers have been shown to successfully improve student learning outcomes across the curriculum (Hendriksen et al., 2005) as well as increase college preparedness (Perin, 2004). Therefore, data informed improvement has potential for a compounded effect across multiple disciplines college-wide as well as within the learning centers. Information gathered from assessment is intended to be shared with ASC leadership and staff as well as, in certain cases, among faculty and students. This study is in partial fulfillment of the assessment goals established in fall 2016 which is to include the entire 2016-17 academic year and is outlined in each section below.

For additional detail on further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Director of Academic Assessment, Academic Affairs Assessment (jfvangaalen@fsw.edu; x16965).

2 WRITING CENTER

In fall 2016, in order to support student achievement of the General Education competencies, the department established a goal of ensuring that participation in the Academic Support Centers (ASCs) is correlated with student success and retention. During the 2016-17 academic year, students with similar entering grade point averages (G.P.A.) who receive support in the ASCs for writing and are enrolled in ENC 1101 *Composition I* or ENC 1102 *Composition II* courses and who have two or more accrued hours in writing consultation visits will obtain satisfactory grades (A, B, or C) at a rate 10% higher than semester students who do not receive support via the Writing Center consultations. Additionally, success (A, B, or C) will be measured by gender and age cohorts with respect to accrued time in writing consultation visits. This objective is defined within the Academic Support assessment program as Outcome #1.

2.1 DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES
The ASC leadership established measure of success for Outcome #1, student success rate in ENC 1101 or ENC 1102 increases by 10% given two or more hours of ASC writing consultation time, was met for four of five student cohorts (the same as that of fall 2015 and spring 2016). Success rates for those receiving greater than two hours of consultation is 67% higher for those with a GPA < 2.0 (although sample size is only 2), 7% higher for 2.0-2.4 GPA, 32% higher for 2.5-2.9 GPA, 14% higher for 3.0-3.4 GPA, and 10% higher for greater than or equal to 3.5 GPA (Table 1). A graphical representation of this data is shown in Figure 1. Note that not all records include a GPA in which to include in analysis.

	n ≥ 2hr	n < 2hr
Goal: Success Rate 10% higher for n ≥ 2hr		
GPA < 2.0	100% (n=2)	33% (n=3)
GPA 2.0 – 2.4	67% (n=12)	60% (n=81)
GPA 2.5 – 2.9	94% (n=16)	62% (n=149)
GPA 3.0 – 3.4	95% (n=21)	81% (n=150)
GPA ≥ 3.5	100% (n=9)	90% (n=63)

Table 1. Success rates in ENC 1101 or ENC 1102 for those receiving greater than two hours consultation in the Writing Center and those receiving less than two hours consultation based on GPA upon entering college.
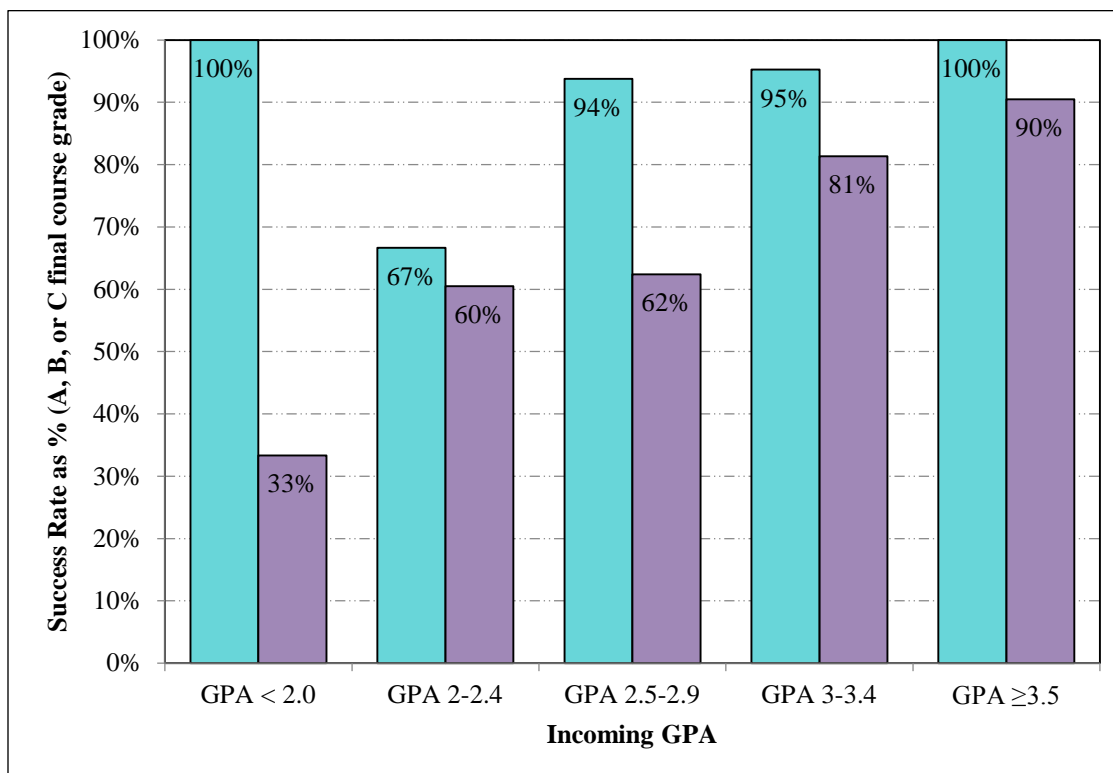

Figure 1. Success rates in ENC 1101 or ENC 1102 for those receiving greater than two hours consultation in the Writing Center (teal) and those receiving less than two hours consultation (purple) based on GPA upon entering college.

A Cochran-Mantel-Haenszel (CMH) test was conducted on the success rate data of those who accrued more than two hours of consultation time in the Writing Center and those that did not to determine statistical significance of the results according to standard methods (McDonald, 2009). In other words, the CMH test compares collectively, inclusive of GPA score bins, whether the two cohorts (≥ 2hr consultation or < 2hr consultation) are statistically significantly different and is not an analysis of individual GPA cohorts. Based on the results of the CMH test for repeated tests of independence, students with greater than two hours of consultation does exhibit a statistically significantly higher success rate than those who accrued fewer than two hours of consultation time (χ^2_{MH}=8.091, 1 d.f., P=0.004). The null hypothesis that the relative proportions of success to failure between students accruing more or less than two hours of consultation time are independent of each other is rejected.

The second portion of Outcome #1 measures success rates based on gender and age cohorts with respect to accrued time in writing consultation visits. In the "Under 20" age range, achievement is slightly higher for the female cohort across all three ranges of time spent in the Writing Center (0 min, 1-119 min, ≥ 120 min) (Figure 2), a result consistent with fall 2015 data and spring 2016 data. In all cases,

success rates improve with time spent in the center. The male age 20-24 cohort exhibits the largest increase in success rate based on time spent (60% for 0 min, 84% for ≥ 120 min).
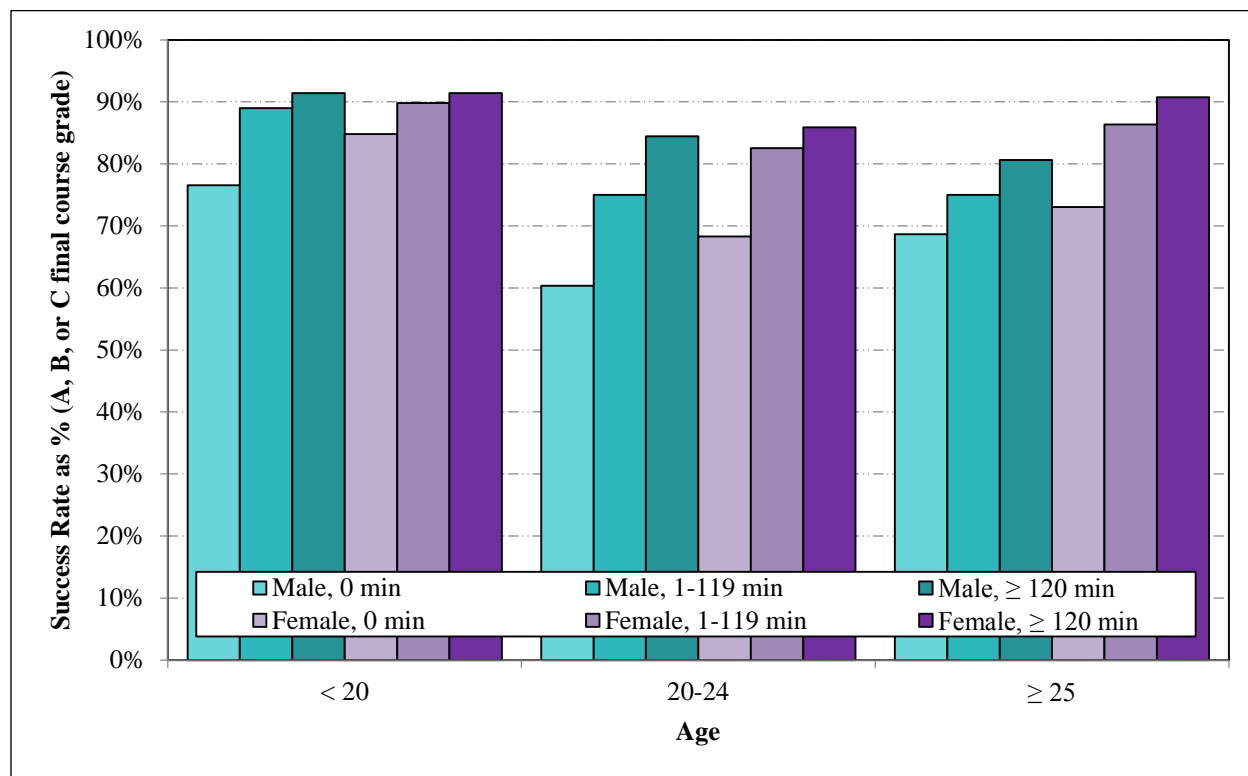

Figure 2. Success rates in ENC 1101 or ENC 1102 for male (teal shades) and female (purple shades) cohorts based on time accrued in the writing center and age range.

2.2   EXPLORATORY ANALYSIS & LONGITUDINAL STUDIES

A comparison of success rate based on time spent in the Writing Center was conducted in order to explore and quantify the value of time spent in writing consultation. The results of the analysis are shown in Figure 3. For students spending two or more hours in the Writing Center, the time minimum used in the definition of Outcome #1, success rate for ENC 1101 or 1102 courses in fall 2016 students increases by 12% over those that did not spend time in the Writing Center (up from 11% in spring 2016, and down from 14% in fall 2015). These results are either on par with or exceed that of comparative research (Cooper, 2010; Hendriksen et al., 2005).

As student demographics and department goals may shift through time, it is important to compare achievement through time along with changes. Figure 4 depicts a comparison of success rate based on time spent in the Writing Center beginning fall 2014 through fall 2016. Both demographics of students and student count vary by semester so it may be more reasonable to compare like semesters (Fall vs. Fall, Spring vs. Spring). In all cases success rate increases with increased time spent in the Writing Center. When comparing like terms, fall 2014, 2015, and 2016, increases are exhibited in all ranges (from 0 min to 1-119 min, and 1-119 min to ≥ 120 min) with the largest occurring in fall 2016, at 12% from 0 min to ≥ 120 min.
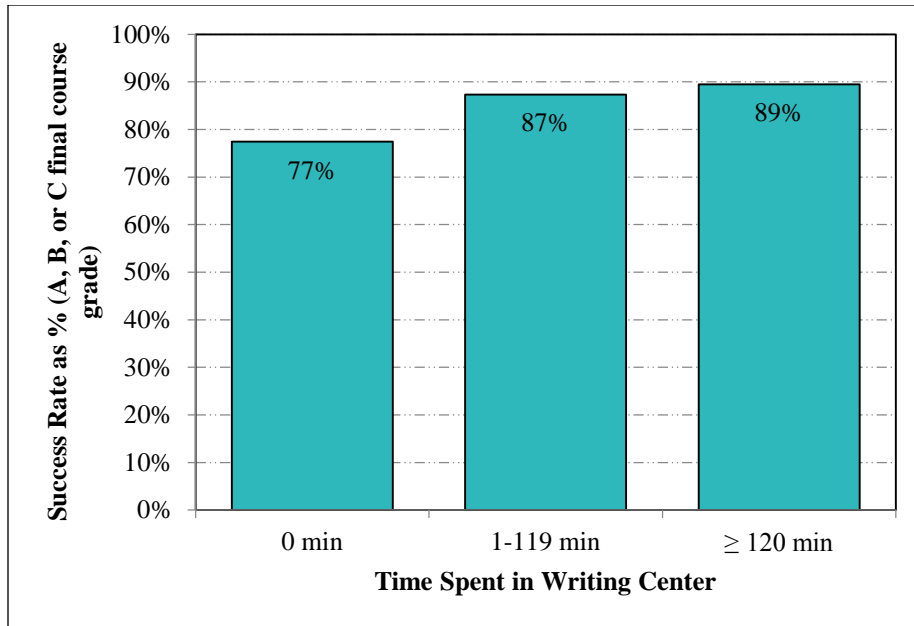
Figure 3. Success rates in ENC 1101 or ENC 1102 based on time spent in the Writing Center.
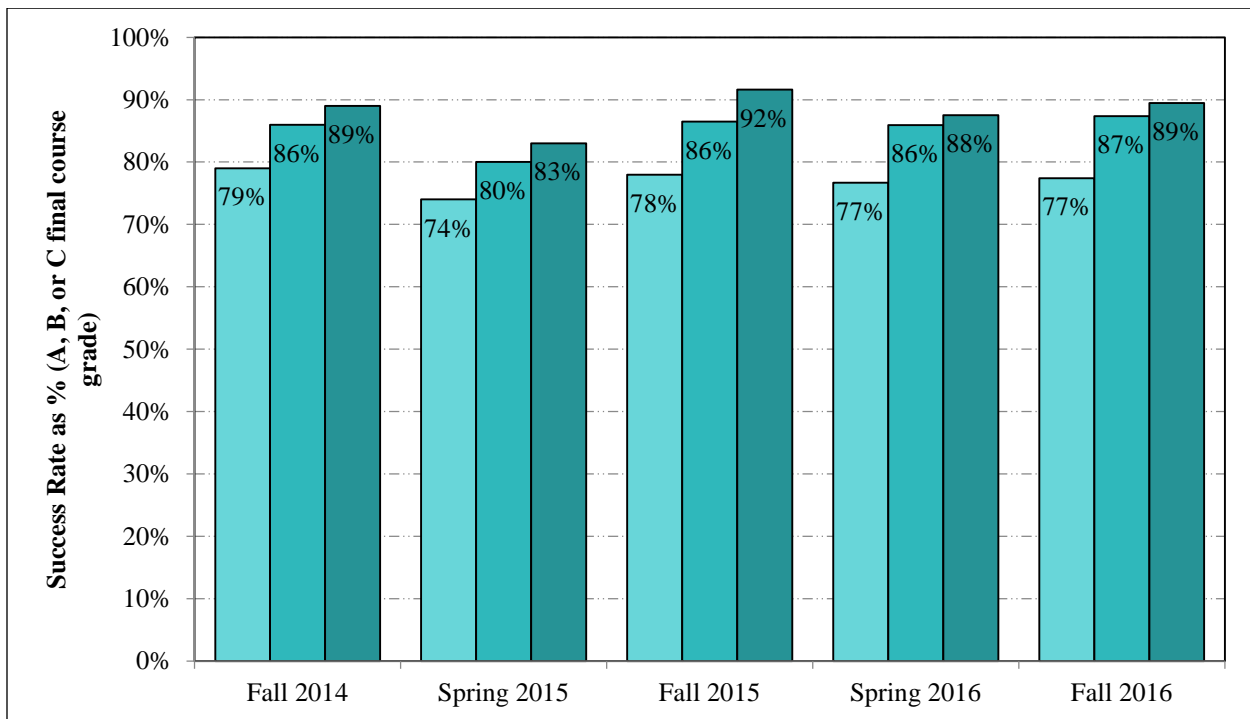

Figure 4. Success rates in ENC 1101 or ENC 1102 based on time spent in the Writing Center for fall 2014 through fall 2016. Light teal denotes 0 minutes spent in the center, dark teal denotes 1-119 minutes spent, and the darkest teal denotes 120 or more minutes spent.

The results of the analysis shown in Figure 3 above highlight the improvement in success rate with time spent in the center. To further investigate the details of this matter, success rate by time spent is broken down further in Figure 5 below. The data exhibits an immediate jump in success rate from 0 minutes spent at the center to under one hour spent (77% to 88%). With the exception of the 7-8 hour bin and the 9-10 hour bin, success rates remain in the upper 80% range or higher.
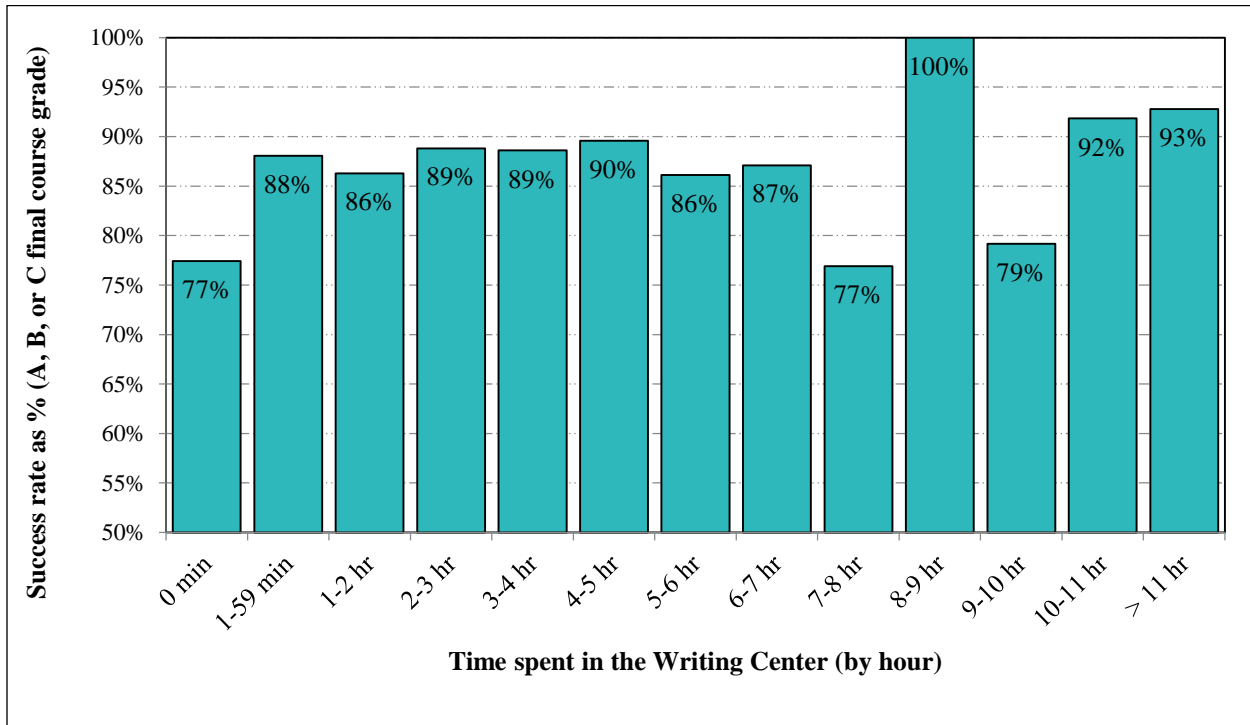

Figure 5. ENC 1101/1102 success rate based on time spent in the Writing Center per hour (up to 11+).

One area often looked at in course-level assessment is that of achievement or success rate based on enrollment type in order to add depth to the causes of the distribution of the artifacts. Figure 6 describes success rate based on time spent in the Writing Center as a function of status as dual enrollment or traditional student. Both dual enrollment students and traditional students exhibit increases in success rates with increased time spent in the Writing Center. The dual enrollment cohort for 1-119 minutes (n=133) exhibits 100% success rate, as does the ≥ 120 minutes (n=59). The traditional cohort also exhibits improvement although success rates overall are lower (67% at 0 minutes, n=2337 to 88% at ≥ 120 minutes, n=502).
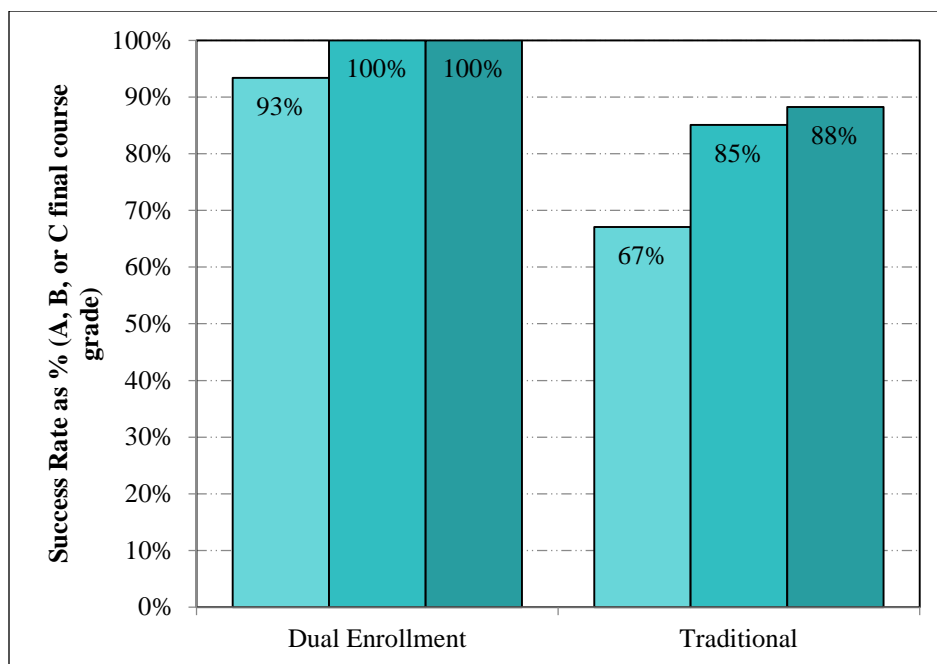
Figure 6. Comparison of ENC 1101/1102 success rates by time spent in the Writing Center disaggregated by student type. Light teal denotes 0 minutes spent in the center, dark teal denotes 1-119 minutes spent, and the darkest teal denotes 120 or more minutes spent.

3   MATH CENTER

In fall 2016, in order to support student achievement of the General Education competencies, the department established a goal of ensuring that participation in the ASCs is correlated with student success and retention. During the 2016-17 academic year, students with similar entering grade point averages (G.P.A.) who receive support in the ASCs for mathematics and are enroll in MAT 0057 *Mathematics for College Success*, MAT 1033 *Intermediate Algebra*, MAT 1100 *Mathematical Literacy for College Students*, and MAC 1105 *College Algebra* courses and who have two or more accrued hours in mathematics tutoring visits will obtain satisfactory grades (A, B, or C) at a rate 10% higher than students who do not receive support via the Math Center. Additionally, success (A, B, or C) will be measured by gender and age cohorts with respect to accrued time in math tutoring visits. This objective is defined within the Academic Support assessment program as Outcome #2.

3.1   DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

The ASC leadership established measure of success for Outcome #2, student success rate in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 increases by 10% given two or more hours of ASC math consultation time, was met in all five cases (up from three in the fall 2015, and up from four in spring 2016). Success rates for those receiving greater than two hours of consultation is 100% high for those with a GPA < 2.0 (although sample was only 1), 25% higher for 2.0-2.4 GPA, 25% higher for 2.5-2.9 GPA, 17% higher for 3.0-3.4 GPA, and 22% higher for greater than or equal to 3.5 GPA (again, sample only 5) (Table 2). A graphical representation of this data is shown in Figure 7. Note that not all records include a GPA in which to include in analysis.

	n ≥ 2hr	n < 2hr
Success Rate 10% higher for n ≥ 2hr		
GPA < 2.0	100% (n=1)	0% (n=2)
GPA 2.0 – 2.4	60% (n=10)	35% (n=71)
GPA 2.5 – 2.9	68% (n=19)	43% (n=159)
GPA 3.0 – 3.4	79% (n=14)	62% (n=146)
GPA ≥ 3.5	100% (n=5)	78% (n=59)

Table 2. Success rates in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 for those receiving greater than two hours consultation in the Math Center and those receiving less than two hours consultation based on GPA upon entering college.

A Cochran-Mantel-Haenszel (CMH) test was conducted on the success rate data of those who accrued more than two hours of consultation time in the Math Center and those that did not to determine statistical significance of the results according to standard methods (McDonald, 2009). In other words, the CMH test compares collectively, inclusive of GPA score bins, whether the two cohorts (≥ 2hr consultation or ≤ 2hr consultation) are statistically significantly different and is not an analysis of individual GPA cohorts. Based on the results of the CMH test for repeated tests of independence, students with greater than two hours of consultation have a statistically significantly higher success rate than those who accrued fewer than two hours of consultation time (χ^2_{MH}=9.103, 1 d.f., P=0.003). The null hypothesis that the relative proportions of success to failure between students accruing more or less than two hours of consultation time are independent of each other is rejected.
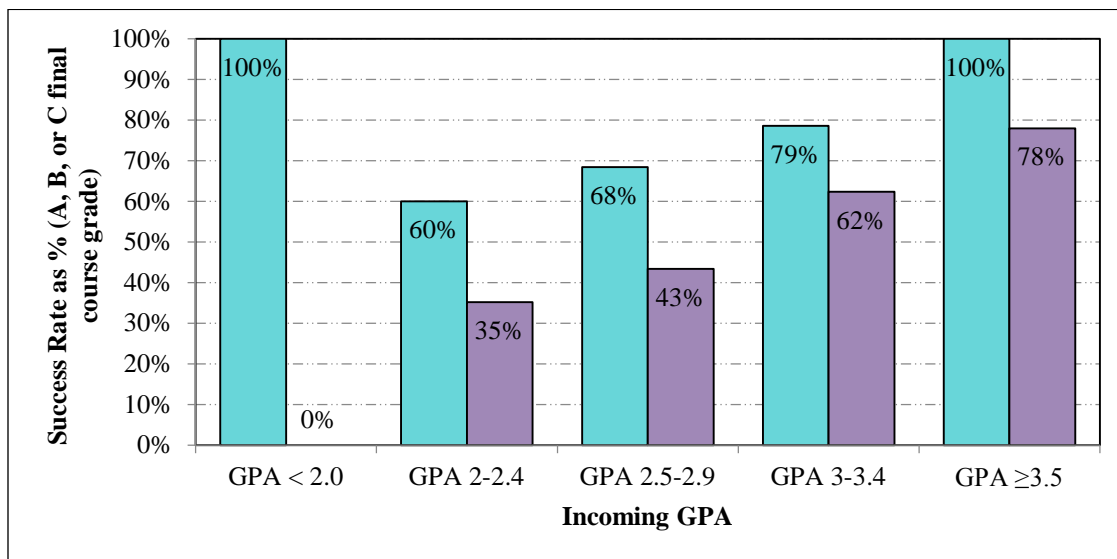

Figure 7. Success rates in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 for those receiving greater than two hours consultation in the Math Center (teal) and those receiving less than two hours consultation (purple) based on GPA upon entering college.

The second portion of Outcome #2 measures success rates based on gender and age cohorts with respect to accrued time in math consultation visits. In the "Under 20" age range, achievement is somewhat higher for the female cohort across all three ranges of time spent in the Math Center (0 min, 1-119 min, ≥ 120 min) with the exception of 0 min in the 20-24 age range (Figure 8). The largest difference is for those with greater than 2 hours spent in the Math Center in the 20-24 age range, where the female cohort success rate is 72% while that of the male cohort is 52%. The "25 and over" cohort does not exhibit any particular pattern. When comparing age groups, the "Under 20" consistently performs better than the other two, a trait consistent with that of fall 2015 and spring 2016 data.
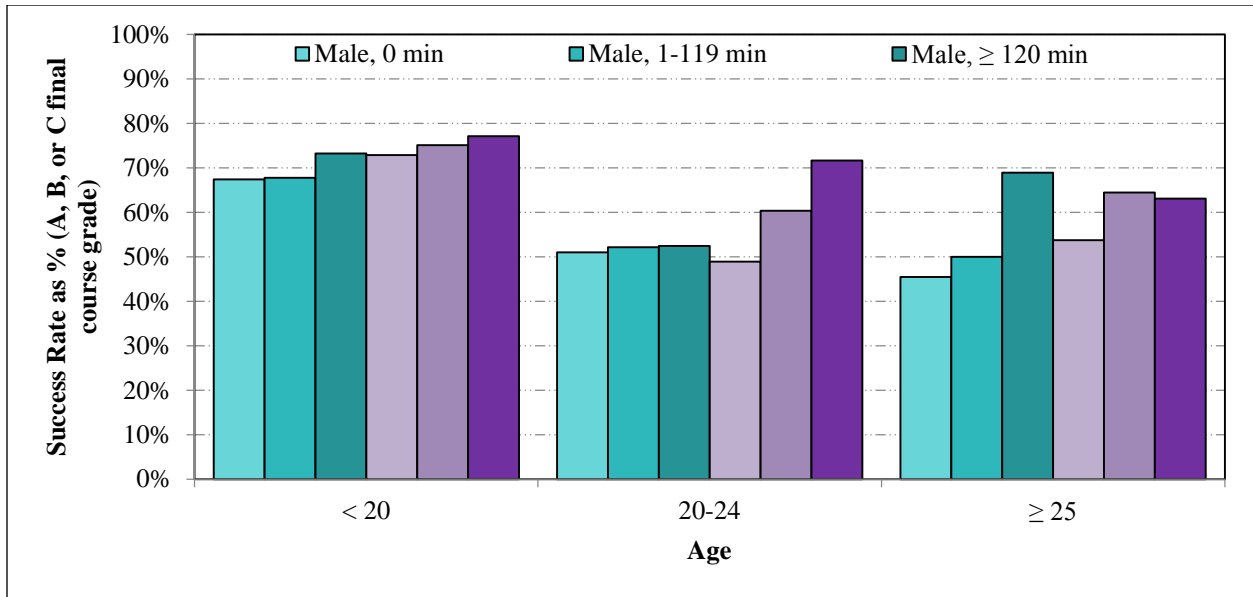
Figure 8. Success rates in MAT 0057, MAT 1033, MAT 1100 or MAC 1105 for male (teal shades) and female (purple shades) cohorts based on time accrued in the Math Center and age range.

3.2   EXPLORATORY ANALYSIS & LONGITUDINAL STUDIES

A comparison of success rate based on time spent in the Math Center was conducted in order to explore and quantify the value of time spent in math consultation. The results of the analysis are shown in Figure 9. For students spending two or more hours in the Math Center, the time minimum used in the definition of Outcome #2, success rate is approximately 7% higher in MAT 0057, MAT 1033, MAT 1100, or MAC 1105, down from 10% in fall 2015 and 9% in spring 2016 (n=4643).
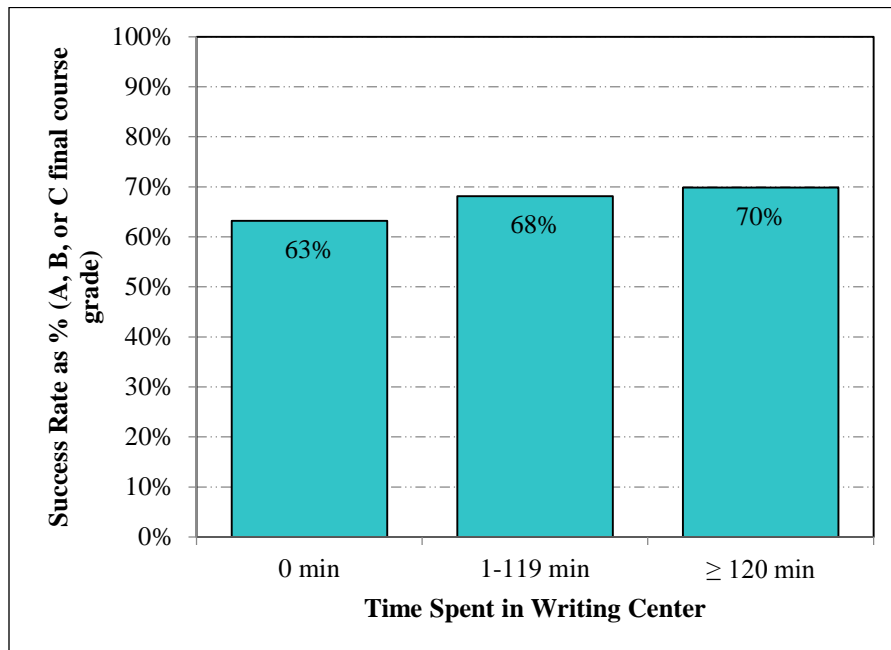

Figure 9. Success rates in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 based on time spent in the Math Center.

As student demographics and department goals may shift through time, it is important to compare achievement through time along with changes. Figure 10 depicts a comparison of success rate based on time spent in the Math Center beginning fall 2014 through fall 2016. Both the demographics of students and student count vary by semester so it may be more reasonable to compare like semesters (Fall vs. Fall, Spring vs. Spring). In three of five terms since fall 2014, success rate increases with increased time spent in the Math Center. In the remaining terms (fall 2014 and fall 2015), success rate peaks for those spending 1-119 min. at the center.
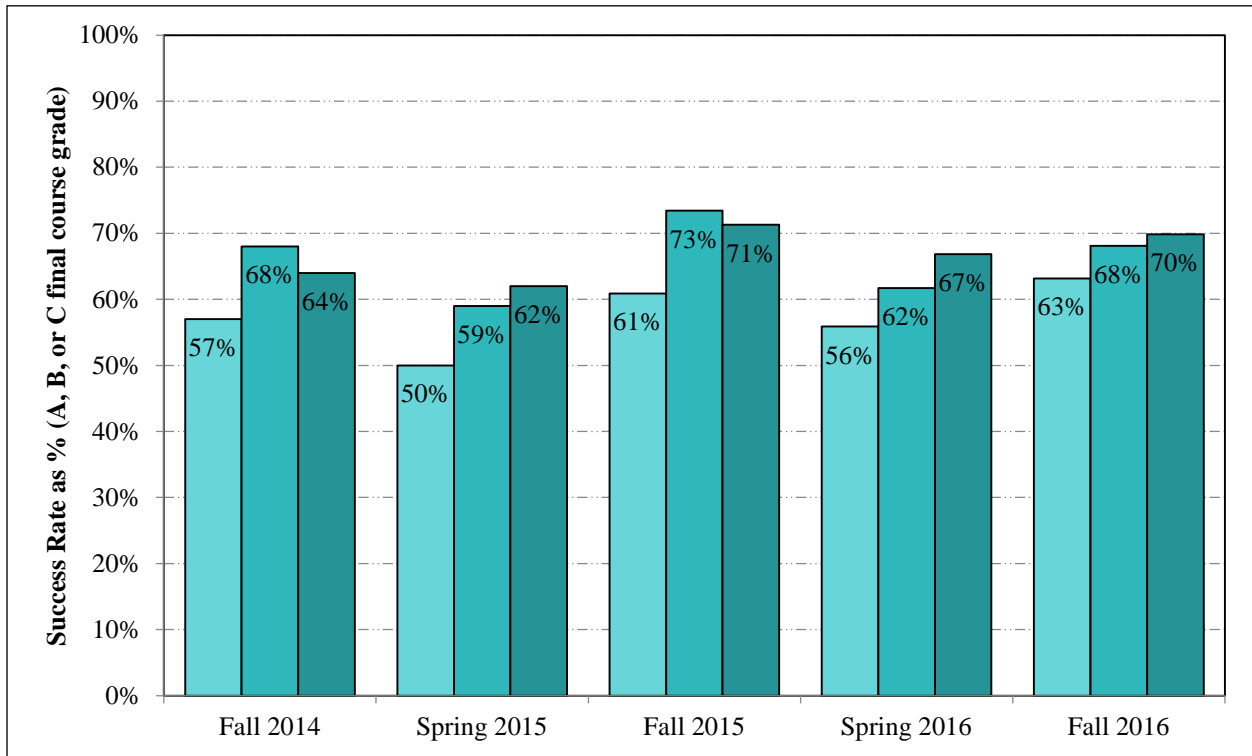

Figure 10. Success rates in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 based on time spent in the Math Center for fall 2014 through fall 2016. Light teal denotes 0 minutes spent in the center, dark teal denotes 1-119 minutes spent, and the darkest teal denotes 120 or more minutes spent.

The results of the analysis shown in Figure 8 above highlight the improvement in success rate with time spent in the center. To further investigate the details of this matter, success rate by time spent is broken down further in Figure 11 below. Like the ENC 1101/1102 Writing Center study, the data exhibit an increase although it is not as immediate. Student success rates without visiting the Math Center are 63%. Success rates increase to the mid-70% range after about 7 hours, with some variation. By comparison, a maintained 10% increase in the Writing Center is exhibited after just 1 hour.
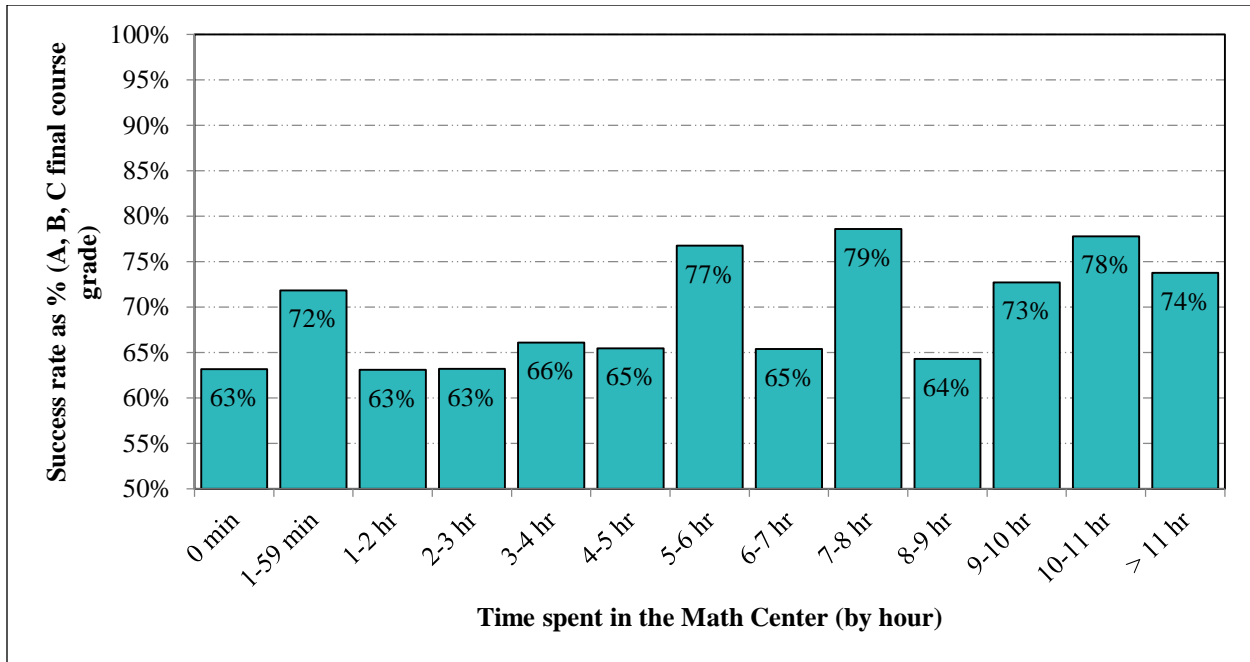
Figure 11. MAT 0057 / 1033 / 1100 / MAC 1105 success rate based on time spent in the Math Center per hour (up to 11+).

One area often looked at in course-level assessment is that of achievement or success rate based on enrollment type. This is done in order to add depth to the causes of the distribution of the artifacts. Figure 12 describes success rate based on time spent in the Math Center as a function of status as dual enrollment or traditional student.

Both dual enrollment students and traditional students exhibit increases in success rates with increased time spent in the Math Center, however, dual enrollment students peak at 1-119 minutes (99%, n=67). Those who spend more than 120 minutes exhibit a lower success rate (91%, n=35) than that of 0 minutes (93%, n=793). Traditional students exhibit a consistently increasing success rate with time spent in the Math Center (55% at 0 minutes, n=2749, 64% at 1-119 minutes, n=497, and 68% at ≥ 120 minutes, n=494). Like the dual enrollment cohort, the Math Center studies have historically shown drop-offs in overall success rates for those spending ≥ 120 minutes, occurring twice in the last five semesters. This drop-off appears to be related in some way to student type.
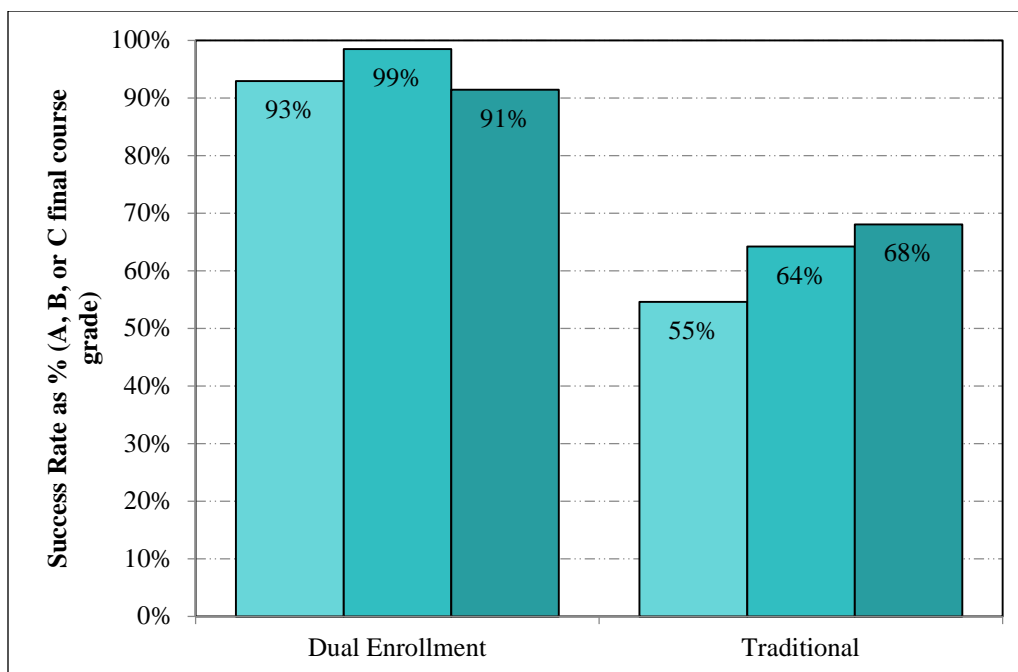
Figure 12. Comparison of MAT 0057, MAT 1033, MAT 1100, and MAC 1105 success rates by time spent in the Math Center disaggregated by student type. Light teal denotes 0 minutes spent in the center, dark teal denotes 1-119 minutes spent, and the darkest teal denotes 120 or more minutes spent.

4   PEER TUTORING CENTER

In fall 2016, in order to support student achievement of the General Education competencies, the department established a goal of ensuring that participation in the Academic Support Centers is correlated with student success and retention. During the 2016-17 academic year, students with similar entering grade point averages (G.P.A.) who receive peer tutoring support in the ASCs for three or more scheduled appointments in MAT 1033, MAC 1105, BIO 1010, and CHEM 2025 will obtain satisfactory grades (A, B, or C) at a rate of 10% higher than semester students who do not receive support. Additionally, success (A, B, or C) will be measured by gender and age cohorts with respect to accrued time in peer tutoring visits. This objective is defined within the Academic Support assessment program as Outcome #3.

4.1   DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

The ASC leadership established measure of success for Outcome #3, student success rate in MAT 1033, MAC 1105, BIO 1010, and CHEM 2025 will increases by 10% given three or more scheduled appointments, was met in two of two cases (the remaining three didn't have samples). Also, sample data for the available areas was minimal as files with GPA limits sample size. There were no students with a recorded incoming GPA below 3.0 that had scheduled three or more peer tutoring appointments with which to compare. Success rates for those scheduling three or more appointments is 39% higher for those with a 3.0-3.4 GPA and 18% higher for greater than or equal to 3.5 GPA (Table 3). A graphical representation of this data is shown in Figure 13. Note that not all records include a GPA in which to include in analysis.

n = 3657	n ≥ 3 appts	n < 3 appts
Success Rate 10% higher for n ≥ 3 appointments		
GPA < 2.0	No data	No data
GPA 2.0 – 2.4	No data	45% (n=29)
GPA 2.5 – 2.9	No data	61% (n=95)
GPA 3.0 – 3.4	100% (n=1)	61% (n=106)
GPA ≥ 3.5	100% (n=2)	82% (n=50)

Table 3. Success rates in MAT 1033, MAC 1105, BIO 1010 or CHEM 2025 for those scheduling 3 or more peer tutoring appointments and those scheduling less than 3 based on GPA upon entering college.
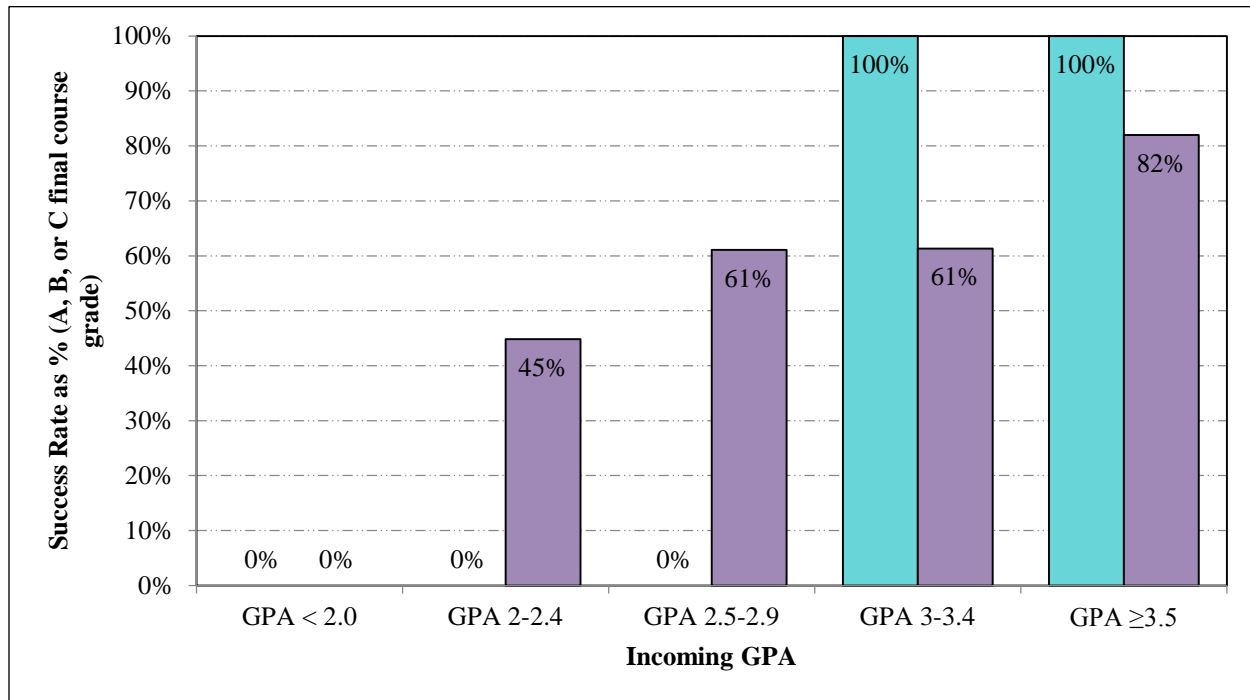

Figure 13. Success rates in MAT 1033, MAC 1105, BIO 1010 or CHEM 2025 for those scheduling 3 or more peer tutoring appointments (teal) and those scheduling less than 3 (purple) based on GPA upon entering college.

No Cochran-Mantel-Haenszel (CMH) test was conducted due to low sample size.

The second portion of Outcome #3 measures success rates based on gender and age cohorts with respect to number of scheduled peer tutoring appointments. In the "Under 20" age range, both male and female cohorts exhibit achievement increases with number of appointments (Figure 14). Both the 20-24 and 25 and over cohorts exhibit no discernible trend in the data. In both cases, for example, females who visited 3 or more times exhibit the lowest success rates. When comparing age groups, the "Under 20" consistently performs better than the other two.
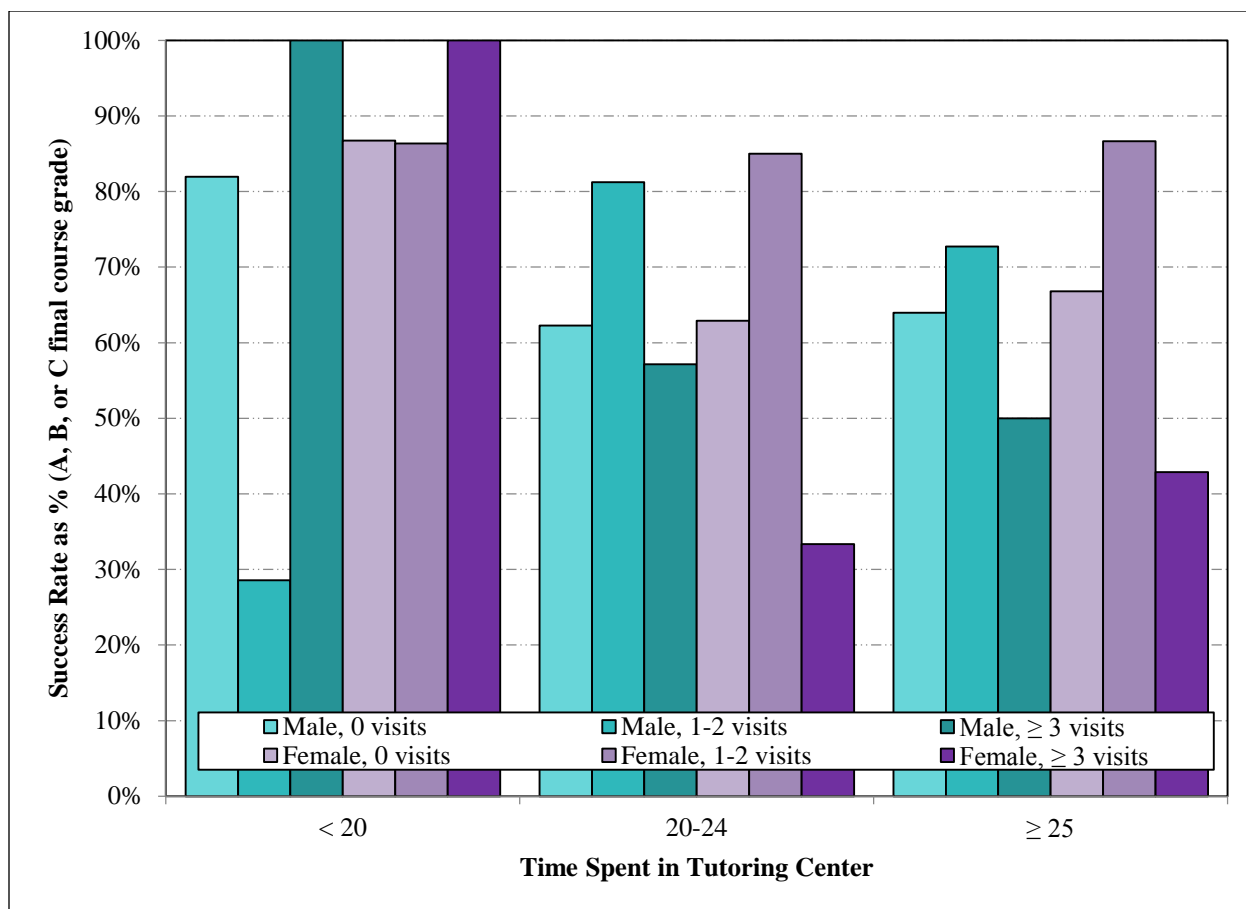
Figure 14. Success rates in MAT 1033, MAC 1105, BIO 101 or CHEM 2025 for male (teal shades) and female (purple shades) cohorts based on number of appointments with peer tutoring and age range.

4.2 EXPLORATORY ANALYSIS & LONGITUDINAL STUDIES

A comparison of success rate based on number of scheduled appointments for peer tutoring conducted in order to explore and quantify the value of peer tutoring. The results of the analysis are shown in Figure 15. For students with 3 or more scheduled appointments, the definition of Outcome #3, success rate is lower than those with no appointments, and so the goal is not met. This is consistent with fall 2015 data. Spring 2016 results, however, exhibit an improvement with time spent in peer tutoring.
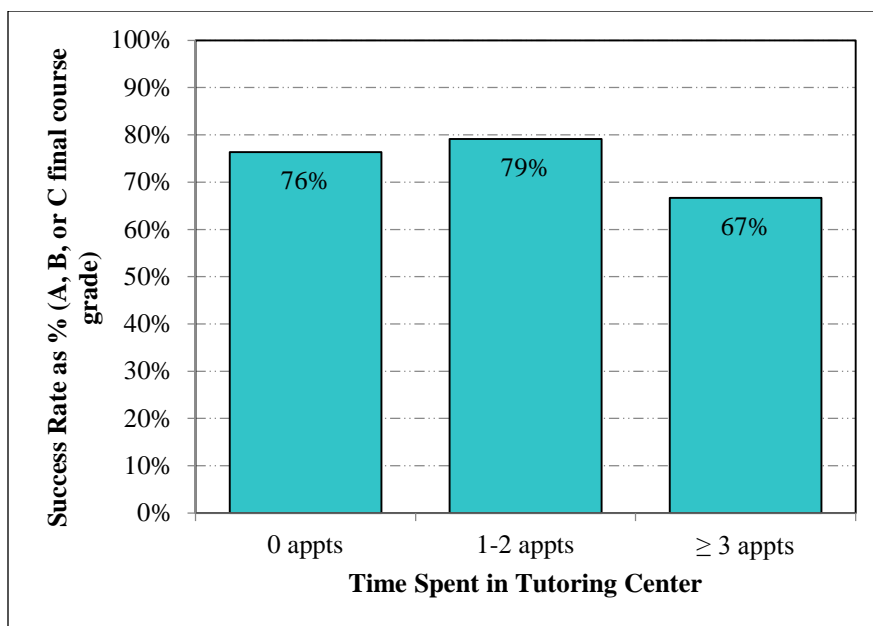
Figure 15. Success rates in MAT 1033, MAC 1105, BIO 1010 or CHEM 2025 based on number of scheduled peer tutoring appointments.

5 CONCLUSIONS

FSW's Academic Support Center employed a series of assessments in order to support and strengthen the capabilities of each center (writing, math, and oral communications). Leadership goals included gauging achievement in composition courses, math courses, biology courses, and chemistry courses as they relate to time spent receiving support from the associated learning center or scheduled number of peer tutoring appointments.

A drill-down of Writing Center results are as follows:
1. Achievement of a 10% increase in success rates in ENC 1101 or ENC 1102 for those receiving greater than two hours of consultation compared with those receiving less than two hours based on incoming GPA (Outcome #1) was met for four of five student cohorts (the same as that of fall 2015 and spring 2016). Success rates for those receiving greater than two hours of consultation is 67% higher for those with a GPA < 2.0 (although sample size is only 2), 7% higher for 2.0-2.4 GPA, 32% higher for 2.5-2.9 GPA, 14% higher for 3.0-3.4 GPA, and 10% higher for greater than or equal to 3.5 GPA.
2. A Cochran-Mantel-Haenszel (CMH) found the results in #1 above to be statistically significantly different.
3. In a comparison of success rates based on gender and age cohorts with respect to accrued time in writing consultation visits, achievement in the "Under 20" range is is slightly higher for the female cohort across all three ranges of time spent in the Writing Center (0 min, 1-119 min, ≥ 120 min), a result consistent with fall 2015 and spring 2016 data. In all cases, success rates improve with time spent in the center. The male age 20-24 cohort exhibits the largest increase in success rate based on time spent (60% for 0 min, 84% for ≥ 120 min).

4. In a comparison of success rates by increased time spent at the Writing Center, success rate for ENC 1101 or 1102 courses in fall 2016 students is 12% above those that did not spend time in the Writing Center.
5. In a longitudinal study comparing terms since fall 2014, in all cases success rate increases with increased time spent in the Writing Center with the largest occurring in fall 2016, at 12% from 0 min to ≥ 120 min.
6. In a study comparing success rates by time spent at the Writing Center using 1 hour increments, results exhibit an immediate jump in success rate from 0 minutes spent at the center to under one hour spent (77% to 88%). With the exception of the 7-8 hour bin and the 9-10 hour bin, success rates remain in the upper 80% range or higher.
7. In a study comparing success rates based on time spent on at the Writing Center based on student type, the dual enrollment students and traditional students exhibit increases in success rates. The dual enrollment cohort for 1-119 minutes exhibits 100% success rate, as does the ≥ 120 minutes. The traditional cohort also exhibits improvement although success rates overall are lower (67% at 0 minutes to 88% at ≥ 120 minutes).

A drilldown drill-down of Math Center results are as follows:
1. Achievement of a 10% increase in success rates in MAT 0057, MAT 1033, MAT 1100, or MAC 1105 for those receiving greater than two hours of consultation compared with those receiving less than two hours based on incoming GPA (Outcome #2) was met in all five cases (up from three in the fall 2015, and up from four in spring 2016). Success rates for those receiving greater than two hours of consultation is 100% high for those with a GPA < 2.0 (although sample was only 1), 25% higher for 2.0-2.4 GPA, 25% higher for 2.5-2.9 GPA, 17% higher for 3.0-3.4 GPA, and 22% higher for greater than or equal to 3.5 GPA (again, sample only 5).
2. A Cochran-Mantel-Haenszel (CMH) found the results in #1 above to be statistically significantly different.
3. In a comparison of success rates based on gender and age cohorts with respect to accrued time in math consultation visits, achievement is somewhat higher for the female cohort across all three ranges of time spent in the Math Center (0 min, 1-119 min, ≥ 120 min) with the exception of 0 min in the 20-24 age range. The largest difference is for those with greater than 2 hours spent in the Math Center in the 20-24 age range, where the female cohort success rate is 72% while that of the male cohort is 52%. The "25 and over" cohort does not exhibit any particular pattern. When comparing age groups, the "Under 20" consistently performs better than the other two, a trait consistent with that of fall 2015 and spring 2016 data.
4. In a comparison of success rates by increased time spent at the Math Center, success rate is approximately 7% higher in MAT 0057, MAT 1033, MAT 1100, or MAC 1105, down from 10% in fall 2015 and 9% in spring 2016.
5. In a longitudinal study comparing terms since fall 2014, in three of five terms since fall 2014, success rate increases with increased time spent in the Math Center. In the remaining terms (fall 2014 and fall 2015), success rate peaks for those spending 1-119 min. at the center.
6. In a study comparing success rates by time spent at the Math Center using 1 hour increments, results exhibit an increase although it is not as immediate as that of the Writing Center. Student success rates without visiting the Math Center are 63%. Success rates increase to the mid-70% range after about 7 hours, with some variation. By comparison, a maintained 10% increase in the Writing Center is exhibited after just 1 hour.

7. In a study comparing success rates based on time spent on at the Math Center based on student type, both dual enrollment students and traditional students exhibit increases in success rates, however, dual enrollment students peak at 1-119 minutes (99%). Those who spend more than 120 minutes exhibit a lower success rate (91%) than that of 0 minutes (93%). Traditional students exhibit a consistently increasing success rate with time spent in the Math Center (55% at 0 minutes, 64% at 1-119 minutes, and 68% at ≥ 120 minutes). Interestingly, like the dual enrollment cohort, the Math Center studies have historically shown drop-offs in overall success rates for those spending ≥ 120 minutes, occurring twice in the last five semesters. This drop-off appears to be related in some way to student type.

A drill-down of Peer Tutoring Center results are as follows:
1. Achievement of a 10% increase in success rates in MAT 1033, MAC 1105, BIO 1010, or CHEM 2025 given three or more scheduled appointments, was met in two of two cases (the remaining three didn't have samples). Also, sample data for the available areas was minimal as files with GPA limits sample size. There were no students with a recorded incoming GPA below 3.0 that had scheduled three or more peer tutoring appointments with which to compare. Success rates for those scheduling three or more appointments is 39% higher for those with a 3.0-3.4 GPA and 18% higher for greater than or equal to 3.5 GPA. A graphical representation of this data is shown in Figure 9. Note that not all records include a GPA in which to include in analysis.
2. No Cochran-Mantel-Haenszel (CMH) was conducted due to minimal sample size (limited files with GPA attached.
3. In a comparison of success rates based on gender and age cohorts with respect to number of peer tutoring appointments, the "Under 20" age range of both male and female cohorts exhibit achievement increases with number of appointments. Both the 20-24 and 25 and over cohorts exhibit no discernible trend in the data. In both cases, for example, females who visited 3 or more times exhibit the lowest success rates. When comparing age groups, the "Under 20" consistently performs better than the other two.
4. In a comparison of success rates by increased number of peer tutoring appointments, success rate is lower than those with no appointments, and so the goal is not met. This is consistent with fall 2015 data. Spring 2016 results, however, exhibit an improvement with time spent in peer tutoring.

6 REFERENCES

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