Public Affairs Research Council of Alabama

Mobile County Public School System Drop-Out Study

Shining a Light on Drop-Outs

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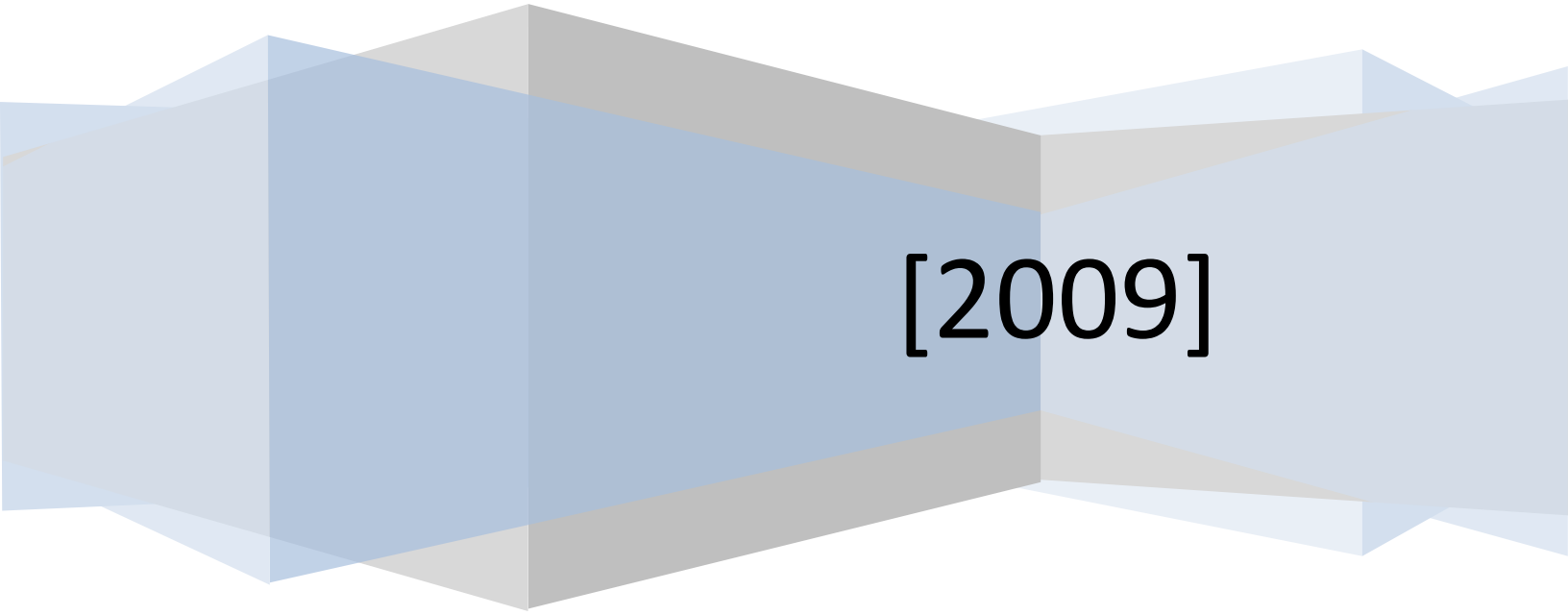

[2009]

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We would like to thank Pat Bryne at MCPSS for all of this GREAT work!

Joe Adams

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MCPSS

MAEF

PARCA

INTRODUCTION

Mobile is the third largest city in Alabama. Mobile County Public School System (MCPSS) has an enrollment exceeding 63,000 students and covers an area of over 1,600 square miles (with 10 incorporated cities)[1]. MCPSS' mission "is to graduate citizens who are literate, responsible and committed to learning over a lifetime."[2] They have created a clear vision statement of how they intend to achieve this goal and have been implementing measures to realize success for their students.

This report is one of the many initial steps taken by MCPSS and other Mobile stakeholders to increase the number of high school graduates throughout the county. In a two part study, the Public Affairs Research Council of Alabama (PARCA) analyzed MCPSS data in partnership with the Mobile County Public School System, Mobile Area Education Foundation, the Research Alliance for Multiple Pathways for Mobile's Youth (a countywide collaboration of leaders in the field of education, business and community leaders), and the Center for Social Organization for Schools at Johns Hopkins University.

MCPSS graciously provided data for two parts. Part I is a longitudinal study that followed students from 6th grade until they left MCPSS. The data helped determine predictive indicators for MCPSS students who have an increased likelihood of not earning a high school diploma. This part identifies patterns leading to graduation and those not leading to graduation. Part II is segmentation study that follows high schools beginning in 9th grade until they leave MCPSS. It is broken up into two sections. Section A provides an overview of graduation outcomes and reviews the effect of being held back one year on graduation. Section B compares graduation rates of those who were ever over-aged *and* under-credited to those who never became over-aged *and* under-credited in high school.

[1] Mobile County Public School System, http://www.mcpss.com/?PN=AboutUs (April 15, 2009).
[2] Mobile County Public School System, http://www.mcpss.com/?PN=AboutUs (April 15, 2009).

EXECUTIVE SUMMARY

The Public Affairs Research Council of Alabama conducted a two part research project. Part I analyzed a cohort of students, using their school records from 6th grade until they left MCPSS. Based on these records, the goal of Part I was to differentiate between students who graduated and those who did not to identify predictive indicators of students not likely to graduate. Part II's goal was two-fold. Section A reviews graduation outcomes for a cohort beginning in 9th grade until they left MCPSS. Section B uses that same cohort to compare graduation rates for students who had and had not been over-aged *and* under-credited.

The goal of Part I was to analyze student records in order to identify similarities between MCPSS students who did not earn high school diplomas. These characteristics were then used to create MCPSS predictive indicators to identify students not likely to graduate from MCPSS. Student records provided by MCPSS for this study consisted of students' identification number, race, gender, birthday, whether a student was retained, attendance (both days enrolled and days absent), grade progression, ADA, special education code, specific disability, migrant information, homeless information, enrollment status, exit reason, LEP, diploma type, out of school suspensions, free and reduced lunch status, and code "c504".

Part I found several key indicators that indentified at-risk middle school and high school students. At-risk students are those not likely to earn a high school diploma from MCPSS. These indicators were divided into two levels: "Yellow Light" and "Red Light". Students who have Yellow Light indicators may have been on the brink of dropping out. Students with Yellow Light indicators can easily slipped into the Red Light category. While most students with Yellow Light indicators typically graduated high school, less than fifty percent of students with Red Light indicators graduated from MCPSS. Both indicators were the same for 6th graders and 9th graders.

Yellow Light indicators consisted of the following:

1) Missed 4-7 days of school in one year;
2) Received 1 out-of-school suspension[*];
3) Failed 1 core class[†].

Red Light indicators consisted of the following:

1) Missed 8-17 days of school in one year;
2) Received 2 out-of-school suspensions;
3) Failed 2 core classes.

The distinctions between the Yellow and Red Light indicators were slight, but the differences in graduation outcomes were great. How schools support students with the aforementioned

[*] PARCA received incident data from MCPSS. As such, the data recorded only the number of out-of-school suspensions a student received and not the severity of each out-of-school suspension.
[†] Middle School core classes were identified by using the "Promotion Retention Policy". High school core classes were identified using the "Educational Planning Guide for Students".

predictive indicators may be one significant distinction between a school with a high graduation rate, and one with a low graduation rate.

There were numerous peripheral findings from Part I. The first finding was that students ***did not have multiple predictive Yellow and Red Light indicators***. Students usually had only one predictive indicator; therefore, administrators should not assume that students who have multiple out-of-school suspensions are not at-risk because they do not also have a failing grade. Secondly, **math was the number one class failed** in both middle school and high school. Although only a quarter of the classes failed in sixth grade were math classes, the percentage of math classes failed jumped significantly in ninth grade. Lastly, students who were **retained one year in high school** had a shockingly decreased likelihood of graduating compared to students who had never been retained. Similarly, students who did not progress from middle school to high school with their sixth grade cohort also had a reduced likelihood to graduate.

The goal of Part II was to compare graduation rates of student who had never been over-aged *and* under-credited to those who (1) had become over-aged *and* under-credited at the end of freshman year and (2) had become over-aged *and* under-credited at any point in high school. Part II followed a student cohort from 9th grade until they left MCPSS.

Findings in Part II revealed that students who were over-aged *and* under-credited at the end of the freshman year of high school or at any point in high school are significantly less likely to graduate.

METHODOLOGY

The Public Affairs Research Council of Alabama (PARCA) conducted a two part research project. Part I analyzed a cohort of students, using their school records from 6th grade until they left MCPSS. Based on these records, the goal of Part I was to differentiate between students who graduated and those who did not to identify predictive indicators of students not likely to graduate. Part II's goal was two-fold. Section A reviews graduation outcomes for a cohort beginning in 9th grade until they left MCPSS. Section B uses that same cohort to compare graduation rates for students who had and had not been over-aged *and* under-credited.

PARCA received 54,363 incident records. Incident records contained the following items: student identification number, race, gender, birthday, having been retained a year, attendance (both days enrolled and days absent), grade progression, ADA, special education code, specific disability, migrant information, homeless information, enrollment status, exit reason, LEP, diploma type, out of school suspensions, free and reduced lunch status, and code "c504."

The first step was to reorganize the records into individual student records based on student identification numbers. Using the computer program SPSS, incident records were reorganized into 5,880 non-incident student records. Next, 1,073 non-relevant student records were removed from the analysis for having the following attributes in the "withdrawal" section of the student's last MCPSS record: transferred out of state, transferred out of MCPSS, transferred to a church or home-based school, transferred to a private school, and deceased.

Data cleaning continued by examining data topics for consistency where consistency is expected, namely the following categories: gender, race, and birthday. Cleaning these categories was done by organizing each category into separate excel workbooks. On one sheet a formula was created to check that each cell in each row was equal to the adjacent cell in that row (excluding the student identification number). When the formula returned anything other than a blank cell, a reference cell counted and recorded the number of non-blank cells in a particular range. That sheet was copied, and its values pasted to a second worksheet where the data was sorted with reference cells containing a non-zero number at the top. Students with consistent information were copied and pasted to a third worksheet and inconsistent records were given to MCPSS for possible corrections. Records that were corrected were re-entered into the data, and 260 irreconcilable records were removed from the analysis.

Of particular notice was the abundance of records with January 1st birthdays. Oftentimes, when a birthday is unknown, January 1st is entered as a space holder until the actual birthday is known. MCPSS corrected many of these records which were then corrected in the dataset.

Information was then grouped by grade. For this task, it was necessary to compare school year with grade and enrollment record categories. This process was the reverse of that used in determining consistency for data topics previously mentioned. Where consecutive data points were equal, as identified by a formula in the row, reference cells identified these rows. Any repeated grades were compared to the appropriate cell containing the respective year. This

allowed the study to identify students who had repeated a grade, as opposed to transferring schools within the school year.

The same process was repeated for school year, grade level, and core class grades, which allowed grade level and core class grades to coincide with the appropriate year. Incidents were then represented by year and grade.

Attendance and out-of-school suspensions were similarly organized by year. When a student transferred between schools, the number of days absent and number of out-of-school suspensions from each school were combined, respectively. Subsequent data topics – free and reduced lunch, special education – were cleaned by summarizing the information. If a student had ever received a free or reduced lunch in middle school/high school, the student record for the appropriate school category was marked with an F or R, and student records were marked with a P for those that never received a free or reduced lunch. Student records with a special education identifier in middle school/high school had their records marked with the special education code that dominated the record. If the record had an equal number of different special education codes, the record was marked with a code identifying multiple special education codes.

The diploma category was cleaned for consistency between types of diplomas and actual student graduation. For example, one student's record indicated that she had received an advanced diploma in 9th grade. Upon further investigation, it became known that the student did not graduate. Additionally, one student's record indicated that she had received an advanced diploma in 11th grade and a regular diploma in 12th grade. Further scrutiny found that the student had received only a regular diploma in 12th grade. Diploma types consisted of the following: Regular Diploma, Advanced Diploma, Occupational Diploma, Certificate of Completion, Credit-Based Diploma, Graduate Certificate of Special Education, Other Credentials, Exit-Requirement Not Complete, and.

Several categories were created: exit age; diploma ever; exit date; lunch status for sixth grade (first year), middle school, ninth grade (first year), and high school; number of transfers (divided into the same categories as those for lunch); out-of-school suspensions (same categories as for lunch); special education for middle school, ninth grade (first year), and high school; number of days absent from school (same categories as for lunch); final withdrawal code (coded as having a specific code or no code); outcome status (dropout – identified as having a withdrawal code, exited – identified as not having a withdrawal code, graduate – identified as having earned a diploma); the first and last attended by each student (school number).

The longitudinal part of the study (Part I) contained 4,547 student records with sufficient demographic, school, and core class grade information in 6th grade. The cohort, as it pertained to students with 9th grade core class information, was reduced to 4,305 students.

The segmentation part of the study (Part II) contained 5,145 student records starting in the 9th grade.

WEAKNESSES

The following are weaknesses in the data:

1) Grade and school year data had to be organized to either identify the year a student entered a grade or the year that a student completed a grade. The approach used was to identify when a student entered 9th grade, but the data does not identify when that student finished 9th grade. For example, if a student entered 9th grade in 2003 and then entered 10th grade in 2005, one could imagine that a student repeated 9th grade, but the data does not identify the student as having repeated the 9th grade. A second possibility is that a student may not have been enrolled in MCPSS in 2004. Data identifying students who are retained was analyzed by hand and is not represented through the grade/year data topics.

2) In order to identify students that had been retained, PARCA did not use the Retention code provided by MCPSS. Instead each record was individually scrutinized as detailed in the methodology section.

3) There was a lack of differentiation between types of out-of-school suspensions. The incident data identified a student as having received an out-of-school suspension, but did not differentiate between different degrees of severity of the suspension – for example a one day out-of-school suspension, or a multi-day out-of-school suspension.

4) Attendance data did not indicate reasons why a student was absent.

5) Students with records that did not indicate a diploma type may not necessarily have dropped out of school. A student without a diploma could have transferred schools without informing the MCPSS.

6) The study only followed one cohort, and had a limited number of data categories.

7) Certificate of Completion was originally identified as a diploma; a student with a Certificate of Completion was identified as having graduated. Recently, this was changed. As a result, graduation rates were calculated higher than actual graduation rates when not taking into consideration a student with a Certification of Completion as having graduated high school. Only a small number of students received a Certificate of Completion. For example, in Part II only 206 of 3053 received a Certificate of Completion.

KEY FINDINGS

The following are key findings from Part I of this study, as they pertain to the Mobile County Public School System:

1) MCPSS had a graduation rate of 55.7 percent for those students being followed starting in 6th grade. Over 50 percent (53.6%) of the graduates were female and 46.4 percent of the graduates were male.

2) Of students who exited school prior to graduating, 54.6 percent (1,101 of 2,013) were between the ages of 17 and 19 and 25.4 percent of students exited school in the 9th grade.

3) The majority of students who exited school were those who reached 9th grade later than the cohort or who repeated 9th grade.

4) The study identified predictive indicator categories for 6th and 9th grade: "Yellow Light" and "Red Light". There are three categories of probability to graduate: number of days absent, number of out-of-school suspensions, number of failed core classes. Yellow Light indicators are having (1) missed 4-7 days of school per year, (2) received one out-of-school suspension and (3) failed one core class. Red Light indicators are having (1) missed 8-17 days of school per year, (2) received 2 out-of-school suspensions and (3) failed 2 core classes.

5) Students did not usually have multiple predictive indicators. A student who had a Yellow or Red Light indicator typically had only one indicator: poor attendance, failed one or more core classes, or had one or more out-of-school suspensions.

6) Students who became over-aged *and* under-credited at any point in high school have a significantly decreased likelihood of graduating.

KEY RECOMENDATIONS

Based on the key findings, key recommendations are as follows:

1) Schools and communities should work together to create a multi-faceted strategy to successfully graduate 100 percent of the student body.

2) The district should fashion a dropout prevention program specifically targeted toward students that were held back during or prior to entering high school. The program should help these students become more adjusted to high school.

3) Using the predictive indicators, the district should construct a two-pronged early-warning system. The first part would identify students who have any Yellow Light indicator categories and the second part should identify students who subsequently fall into the Red Light indicator categories.

4) Since students do not usually have multiple predictive indicators, the early-warning system should identify all students with any one of the three predictive indicator categories: poor attendance, failed one or more core classes, or had one or more out-of-school suspensions.

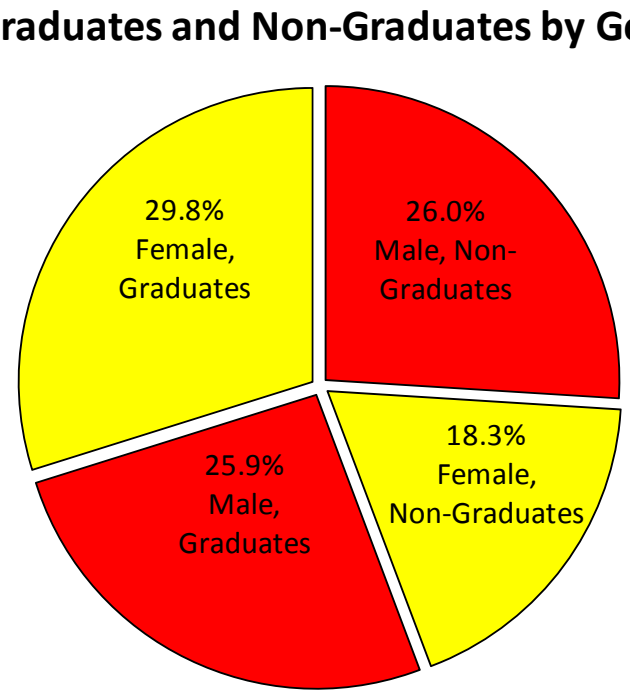
5) Schools and communities should adopt best practices to better serve OAUC youth. These best practices should provide students with a variety of high quality educational options and supports.

PART I: THE 6TH GRADE COHORT

WHO GRADUATES?

"Who Graduates" is broken out into four sections: Gender, Race, Age, and Special Education. Overall, the sample consisted of 4,547 student records, of which 55.7 percent (2,534 of 4,547) graduated. The data showed that similar to findings in other studies more females than males graduated. In MCPSS, race was not statistically significant to graduation outcomes, and most students that exited school did so mainly between the ages of 17 and 19. Additionally, in most cases, there was no statistically significant difference in graduation outcomes between students with or without a special education identifier.

CHART 1



GENDER

Chart 1 identifies the percent of the whole for the following groups: female graduates, female non-graduates, male graduates, and male non-graduates. When broken down by gender, the sample was composed of 48.1 percent females (2,188 of 4,547) and 51.9 percent males (2,359 of 4,547). More than fifty percent of graduates were female (53.6%, 1,357 of 2,534), compared to 46.4 percent male (1,177 of 2,534). The opposite was true for non-graduates. The majority (58.7%) of non-graduates was male (1,182 of 2,013). Overall, 29.8 percent were female graduates (1,357 of 4,547), 18.3 percent were female non-graduates (831 of 4,547), 25.9 percent

were male graduates (1,177 of 4,547), and 26.0 percent were male non-graduates (1,182 of 4,547).

TABLE 1

DISTRIBUTION OF GRADUATES AND NON-GRADUATES BY RACE

Race	Frequency	Percent of Total	Percent Graduates w/i Race	Percent Non-Graduates w/i Race
Asian	58	1.3%	46.6%	53.4%
Black	2362	51.9%	55.0%	45.0%
Hispanic	12	.3%	33.3%	66.7%
Indian	11	.2%	36.4%	63.6%
White	1935	42.6%	57.2%	42.8%
Bi-Racial	169	3.7%	57.4%	42.6%

RACE

Table 1 identifies students in the sample broken out by race.[3] The Mobile County Public School System was composed of mainly Black and White students (94.7%, 4,297 of 4,547)). The study found that race, as a predictive indicator of graduation status, was not statistically significant to the .05 level.

AGE

The study charted the age of non-graduating students against the grade at which they exited school (See Appendix Table A1). In this manner, the study clearly identifies the percent of non-graduating students by age and grade. The study found that the majority of non-graduating students (54.6%, 1,101 of 2,013) exited school between the ages of 17 and 19. Specifically, 16.8 percent of non-graduating students exited at the age of 17 (339 of 2,013), 21.3 percent exited at 18 (429 of 2,013), and 16.5 percent exited at the age of 19 (333 of 2,013).

Although students exited as older teenagers, nearly 25.0 percent (25.4%, 511 of 2,013) of non-graduating students exited school in the 9th grade.

SPECIAL EDUCATION STUDENTS

The study did not find any significant difference between students with or without a special education identifier in middle school - with the exception of students with emotional issues and those who were identified as gifted and talented.

[3] Students categorized as "Bi-Racial" self-identified as multiple races throughout their educational career.

TABLE 2

SPECIAL EDUCATION AND GRADUATION OUTCOMES

Special Education Code	Total number of students	% of Total	Non-Graduates	% Non-Graduates
Academic Issue	507	11.2%	244	48.1%
Emotional Issue	41	0.9	30	73.2
Gifted and Talented	237	5.2	69	29.1
Health/Physical issues	273	6.0	120	44.0
Non-Special Education Students	3489	76.7	1550	44.4
Total	4547	100.0%	2013	

Table 2 identifies those with and without a special education identifier.[4] Although students with emotional issues represent a small segment of the cohort, they have an overwhelming propensity to dropout (30 or 41, 73.2%). This percent was significantly higher than the other groups of students, but the group was considerably smaller. Similarly, 29.1 percent (69 of 237) of students identified as gifted and talented did not graduate. Although this percentage was remarkably lower than the overall percent of non-graduates (44.3%), it was shockingly higher than one would have imagined for students identified as gifted and talented.

RECOMMENDATION

Schools and communities should work together to create a multi-faceted strategy to successfully graduate 100 percent of the student body.

CAN WE PREDICT WHO GRADUATES?

Part I followed a cohort of 6th graders starting in the year 2000 with an aim of identifing any shared predictive factors as early as 6th grade that could predict students' graduation outcome.

YELLOW LIGHT AND RED LIGHT INDICATORS

The **Yellow Light** indicator identified students who are at-risk of possibly not graduating. Students with **Red Light** indicators had less than a fifty percent chance of graduating. Looking at early indicators for both 6th and 9th graders, this study found that Yellow and Red Light indicators had the same thresholds for both grades. It is important to look at students in both grades when using these early indicators.

ATTENDANCE MATTERS

[4] See Appendix A Table A4 for further clarification of each special education identifier

The study found that of 9th graders who missed an average of 0-3 days, 85.0 percent graduated (619 of 728). Furthermore of those who missed an average of 4-7 days, 74.2 percent graduated (911 of 1,228).

When separating students who missed an average of 0-7 days of school from those that missed eight or more days, there was a clear divide. Nearly 50.0 percent (49.3%, 1956 of 3970) of students missed an average of 0-7 days; of those that missed an average of 0-7 days, 78.2 percent (1,530 of 1,956) graduated compared to the 49.9 percent (1,004 of 2,014) of graduates from the group that missed an average of eight of more days.

CHART 2

DAYS MISSED BY GRADUATES AND NON-GRADUATES IN 9TH GRADE

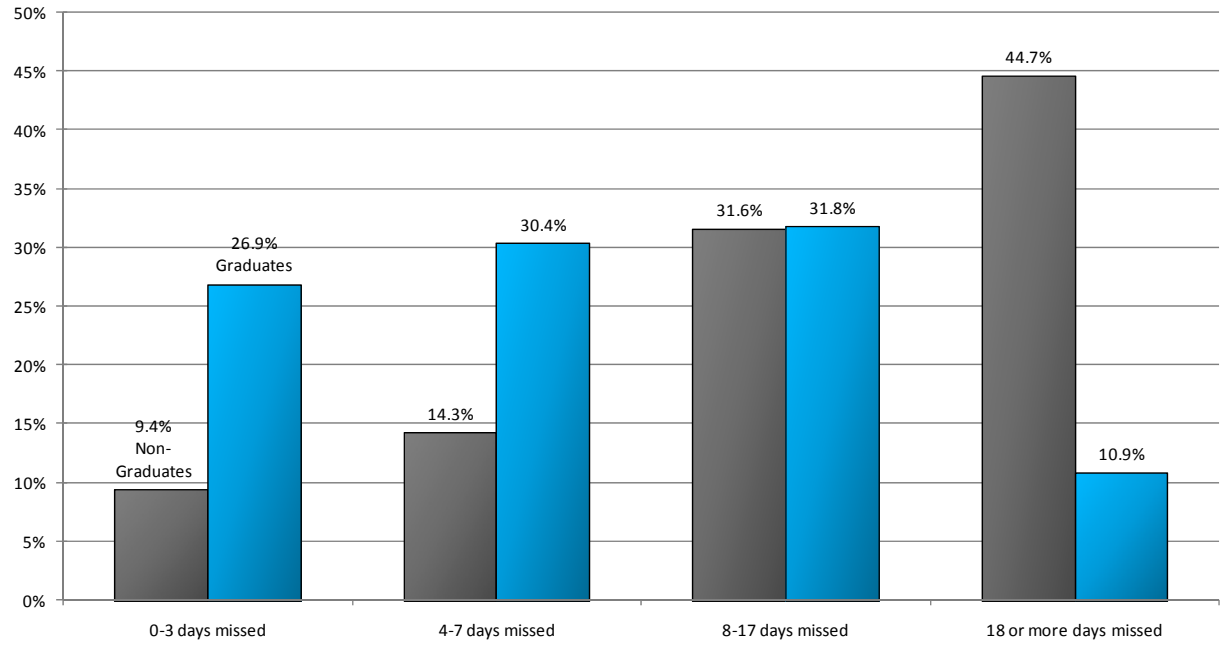


Chart 2 shows graduates and non-graduates by the number of days missed in 9th grade. Graduates are represented by blue bars, non-graduates are represented by grey bars.

For the most part, students who graduated are evenly represented in the first three groups: 26.9 percent missed 0-3 days (671 of 2,498), 30.4 percent missed 4-7 days (760 of 2,498), and 31.8 percent missed 8-17 days (795 of 2,498). This is a stark contrast to non-graduating students who are represented in the last two groups: 32.8 percent missed 8-17 days (442 of 1,397) and 44.7 percent missed 18 or more days (624 of 1,397). Less than one in three students graduated who missed 18 or more days of 9th grade.

- Attendance Indicator

The Yellow Light indicator identified students who started to show signs that they may not be on the path toward graduating. Students who miss four to seven days of school were at-risk, but they were still likely to graduate.

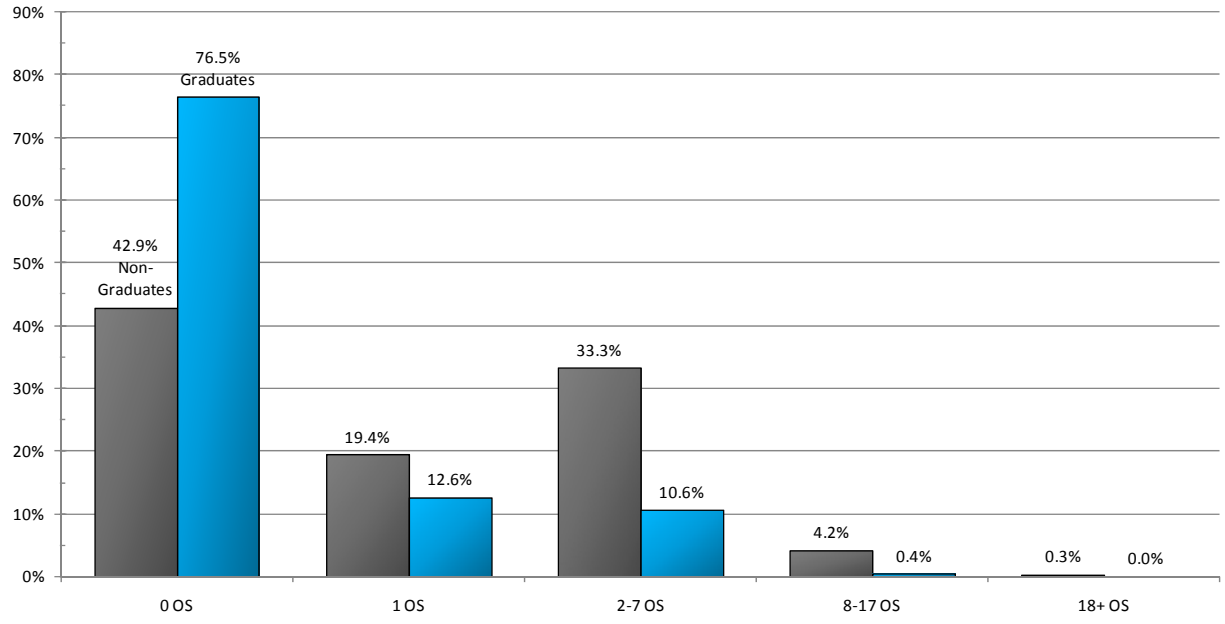
The Red Light indicator identified students who had a less than fifty percent chance of graduating. The chance of not graduating is increased significantly when having missed eight to seventeen days of school (49.9%, 1,066 of 2,133).

SUSPENSION MATTERS

The probability of graduating is unambiguously and positively correlated to the number of out-of-school suspensions a student received in middle school. There is a 76.6 percent (1,968 of 2,568) chance to graduate without having received an out-of-school suspension, but having received one out-of-school suspension drops the likelihood to graduate to 56.1 percent (170 of 304), and having received between two and seven decreases the likelihood to 40.9 percent (333 of 813). For students in this study that received eight or more out-of-school suspensions, only 22.1 percent graduated (63 of 285). Furthermore, of those students who were in MCPSS for 9th grade, 45.9 percent (1,823 of 3,970) never received an out-of-school suspension in either middle school or high school. Of these students, 82.6 percent graduated (1,505 of 1,823).

CHART 3

OUT-OF-SCHOOL SUSPENSIONS BY GRADUATES & NON-GRADUATES IN 9TH GRADE



Looking only at students in their first year of 9th grade, Chart 3 groups graduates and non-graduates according to the number of out-of-school suspensions that each student received that

year. The majority of students who graduated (76.5%, 1,911 of 2,498) did not receive an out-of-school suspension in their first year of 9th grade. The majority of non-graduates (57.1%, 798 of 1,397) received at least one out of school suspension. One-third of non-graduates received between two and seven out-of-school suspensions in their first year of 9th grade (462 of 1,397).

- **Out-of-School Suspension Indicator**

  The Yellow Light indicator for out-of-school suspension is having received one. As noted above, students who received one out-of-school suspension had a graduation rate of 56.1 percent.

  The Red Light indicator for out-of-school suspension is having received two. The graduation rate for these students was 44.3 percent (329 of 796).

CLASS FAILURE MATTERS

Using only students with core classes in 6th grade, the sample size was reduced to 4305 students. Table 3 identifies the frequency, and percent, at which graduates and non-graduates failed core classes in 6th grade.

TABLE 3

FAILED CORE CLASSES IN 6TH GRADE

Class Type	Number of failed core classes	% of all failed core classes	% of all that are Non-Graduates	% of all that are Graduates
Language Arts	268	17.6%	76.9%	23.1%
Science	315	20.6	77.5	22.5
Math	390	25.6	76.9	23.1
Social Studies	318	20.8	76.7	23.3
Reading	235	15.4	74.9	25.1
Total	1526	100%	76.7%	23.3%

In Table 3 math class is identified as being failed more than any other core class; over twenty-five percent (25.6%, 390 of 1,526) of failed core classes were math classes. Social Studies and Science classes were the second and third most failed classes. Non-graduates failed over three-fourths (76.7%, 1,170 of 1,526) of the core classes failed, while graduates failed 23.3 percent (356 of 1,526) of the core classes that were failed. Among non-graduates, the average number of failed core classes was 1.3. Of those non-graduates who did fail a core class, the average number of failed classes was 2.6; if a student was likely to fail one class, that student was likely to fail more than one class.

These trends continued into high school. Table 5 looks at the number of failed core classes in the first year of 9th grade.[5] It is important to note that most students who receive an F in 6th grade are not necessarily likely to receive an F in 9th grade (See Appendix Chart A3).

TABLE 4

FAILED CORE CLASSES IN 9TH GRADE

Class Type	Number of failed core classes	% of all classes failed	% of all that are Non-Graduates	% of all that are Graduates
English	506	25.4%	73.1%	26.9%
Science	298	15.0%	81.2%	18.8%
Math	914	45.9%	60.3%	39.7%
History	243	12.2%	79.4%	20.6%
Reading *	32	1.6%	81.3%	18.8%
Total	1993		69.3%	30.7%

Table 4 identifies the number of classes failed in the first year of 9th grade. Math continued to be the number one core class failed, but the percentage increased from 25.6 percent to 45.9 percent (914 of 1993) of all failed core classes. The percent of all core classes failed by non-graduating students decreased slightly (69.3, 1362 of 1993), and increased for students who graduated (30.7, 611 of 1993).

- **Grade Indicator**

  The Yellow Light indicator for core classes is having received one F. Of students who received one F, only 35 percent (112 of 320) graduated.

  The Red Light indicator for core classes is having received more than one F. Of those that received more than one F, only 21.7 percent graduated (84 of 387).

RECOMMENDATION

Using the predictive indicators, the district should construct a two-pronged early-warning system. The first part would identify students who have any Yellow Light indicator categories and the second part should identify students who subsequently fall into the Red Light indicator categories.

SCHOOLS ATTENDED BY STUDENTS WITH EARLY INDICATORS

[5] Although "Reading" is not a core high school class, it is represented in this chart because it must be noted that there is a segment of the cohort that continue to fall behind in reading skills in high school.

Our 6th grade cohort attended one of 20 schools. All schools in our sample had a high number of students with a Yellow or Red Light indicator in 6th grade. This section identifies which schools successfully graduated these students.

CHART 4

PERCENT OF HIGH SCHOOL STUDENTS WHO HAD AT LEAST ONE INDICATOR IN 6TH GRADE

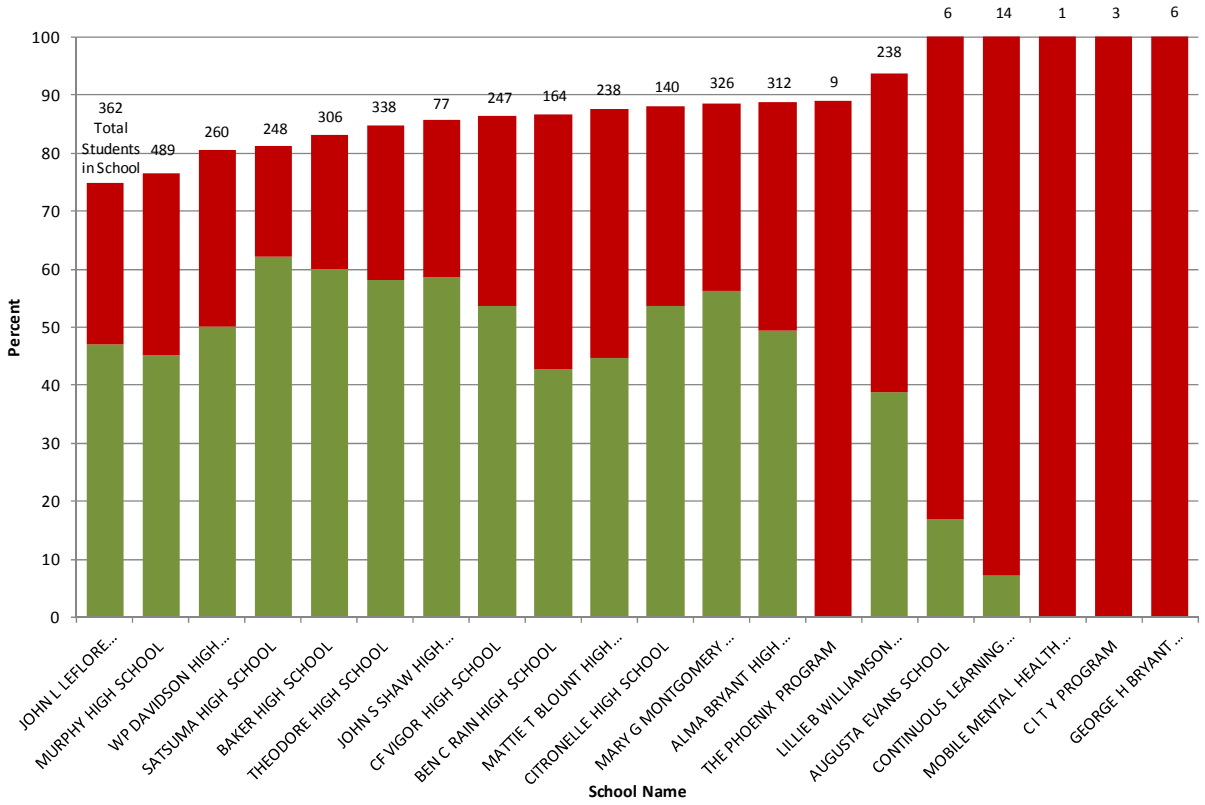


Chart 4 identifies each school and the percent within the sample from that school that had either a Yellow or Red early indicator in 6th grade. Within the bars, the red represents the percent of students with any early indicator in 6th grade; the green represents the graduates. The data suggests that all high schools have a relatively high percentage of students with early indicators in 6th grade; some schools have substantially greater success than others in graduating these students. One high school of notice is Satsuma High School, which has 248 students in the sample. Of those 248 students, over eighty percent (81.0 percent, 201 of 248) had early indicators in sixth grade. Of that group, Satsuma graduated 62.1 percent (154 of 248). Baker High School, Theodore High School, Mary G. Montgomery High School all had similar findings.

From the schools listed in the above chart, Lillie B. Williamson stands out. Over ninety percent (93.7%, 223 of 238) had indicators in 6th grade. Of that group, Lillie B. Williamson graduated 38.7 percent (92 of 238). Similar high schools include Ben C. Rains, Murphy and John L. Leflore High Schools, which graduated less than fifty percent of students with indicators in 6th grade.

RECOMMENDATION

Schools and districts must consider looking for and implementing national best practices that help increase graduation outcomes for ALL students, as suggested by the evidence that no high school graduated more than 62% of students with early indicators. Work must be done to increase the effectiveness of all schools to graduate students, especially those with early-indicators.

OTHER IMPORTANT FINDINGS FROM PART I

Following students from 6th grade, and only considering when they made it to 9th grade, the study found that students who did not matriculate to 9th grade with the rest of their cohort had a decreased likelihood of graduating. The study found that repeating a grade decreased the chances of graduating.

GETTING TO 9TH GRADE ON TIME MATTERS

CHART 5

YEAR ENTERING 9TH GRADE

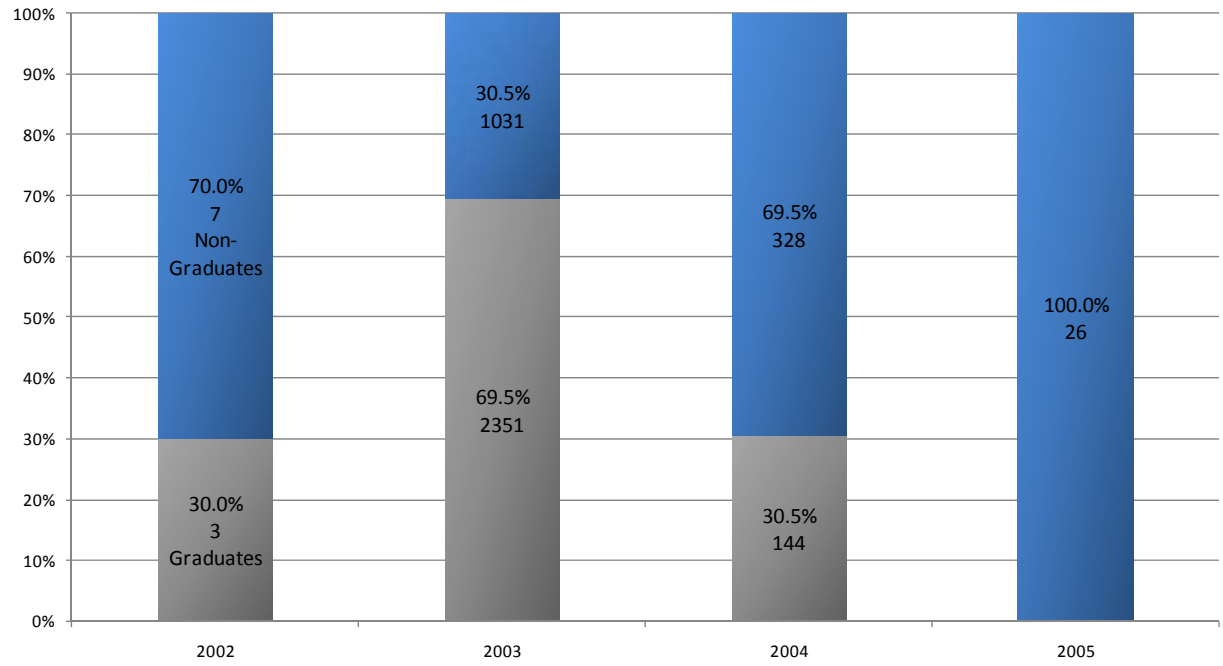


Chart 5 presents the data in terms of students who should have matriculated to 9th grade in 2003. Of those students who matriculated on time, 69.5 percent graduated (2351 of 3,382). Of those that matriculated one year late, only 30.5 percent graduated (144 of 472); no student graduated (0 of 26) among those that matriculated two or more years late.

Ten students entered 9th grade one year early and 70.0 percent (7 of 10) did not graduate. Not represented on the chart are the 75 students who either spent 9th grade in a different school system, or entered 9th grade in 2006 or 2007.

RECOMMENDATION

Resources must be directed at ensuring students matriculate to 9th grade on time and are ready to learn, otherwise students have a very slim chance of graduating (30% or less).

REPEATING A GRADE

The last section of Part I examined the relationship between repeating a high school year and graduation outcome. This section re-analyzed the original data to determine exactly which students are retained and enrolled for a subsequent year of school.

CHART 6

STUDENTS RETAINED AFTER FIRST YEAR OF 9TH GRADE

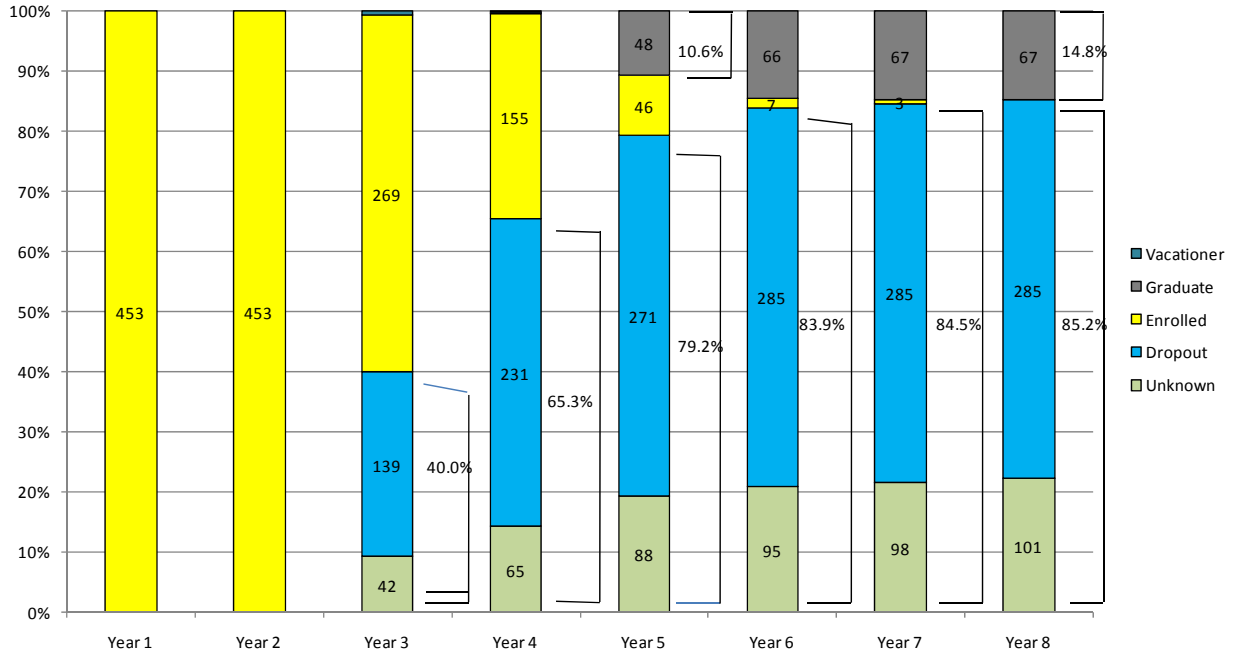


Chart 6 illustrates students' progress through high school after having been retained after their first year of 9th grade.[6] After the second year of high school 40 percent (269 of 463) of these students exited school. After their third year of high school, over sixty percent (65.3%, 296 of 463) of the students exited.

The correlation between repeating a high school year and graduation outcomes is clear. The graduation rate for students who were retained (and actually repeated 9th grade) was 14.8 percent (67 of 463). This is significantly lower than the graduation rate of 64.0 percent for all students over eight years of attending high school (2492 of 3895, See Appendix Chart A2).

This decreased graduation rate is not unique to students who repeat the 9th grade. The same is true for students whose repeated grades 10 or 11, although respectively graduation rates are slightly higher: 16.6 percent (30 of 181) and 15.7 percent (27 of 172).

RECOMMENDATION

Schools and communities must focus on helping students successfully complete each high school year and provide intensive academic and social supports to those who do repeat a grade in order to prevent students from dropping out.

[6] Chart 13 tracks 463 students who are retained after 9th grade and enrolled in a second year of 9th grade.

PART II: THE HIGH SCHOOL COHORT

The segmentation section (Part II) of the study followed a second cohort of 5,145 9th graders until they left MCPSS. Part II had a twofold goal in which Section A reviewed general graduation outcomes and the effect of repeating a grade on graduation. Section B examined the graduation outcomes of students who became over-aged *and* under-credited compared to those who did not.

SECTION A: OUTCOMES MATTER

Section A of Part II presents the number of students that graduated within four years and within six years. It continues by taking a closer look at those students that either graduated or dropped out within four years by separating out students that graduated within four years without having repeated a grade compared to those that repeated a grade. The particular year students repeated are also represented. Finally, Section A provides an overview of the types of diplomas students earn and the year in which that diploma is year.

CHART 7

GRADUATION RATES FOR THE CLASS OF 2006

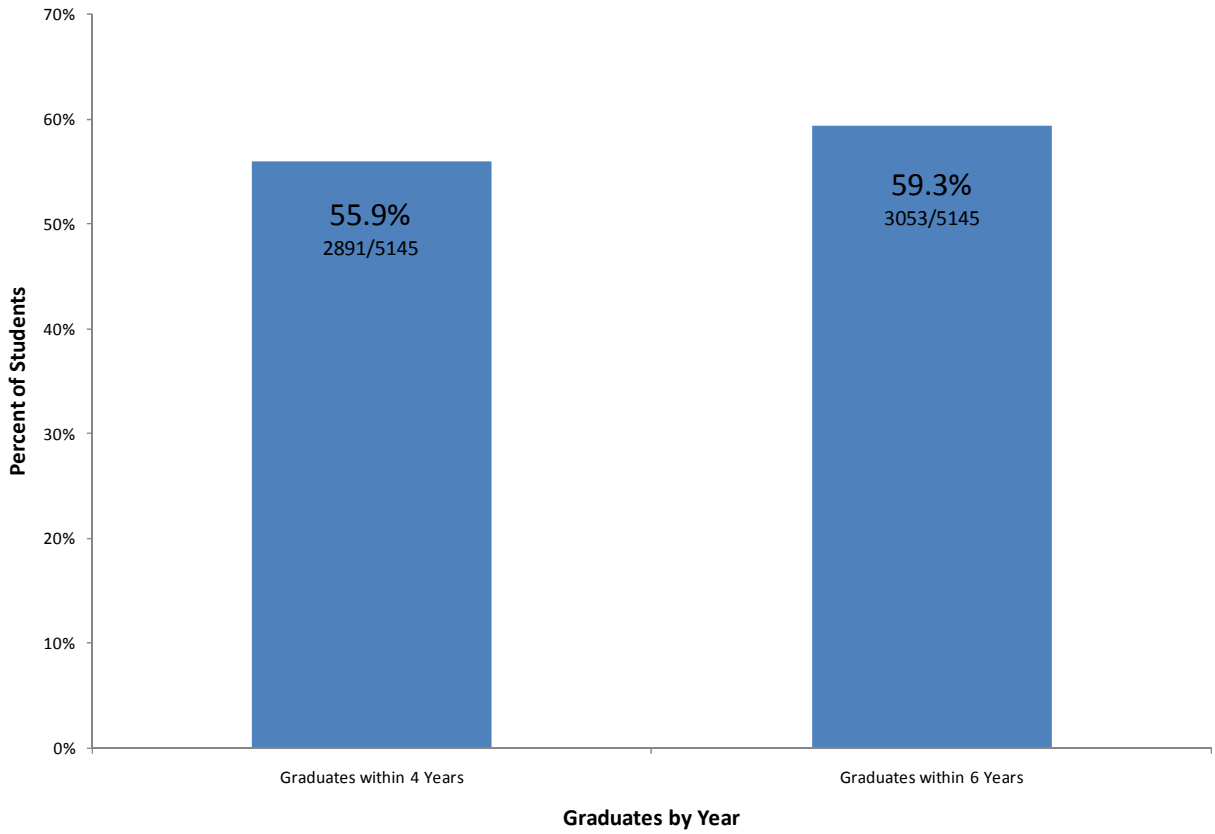
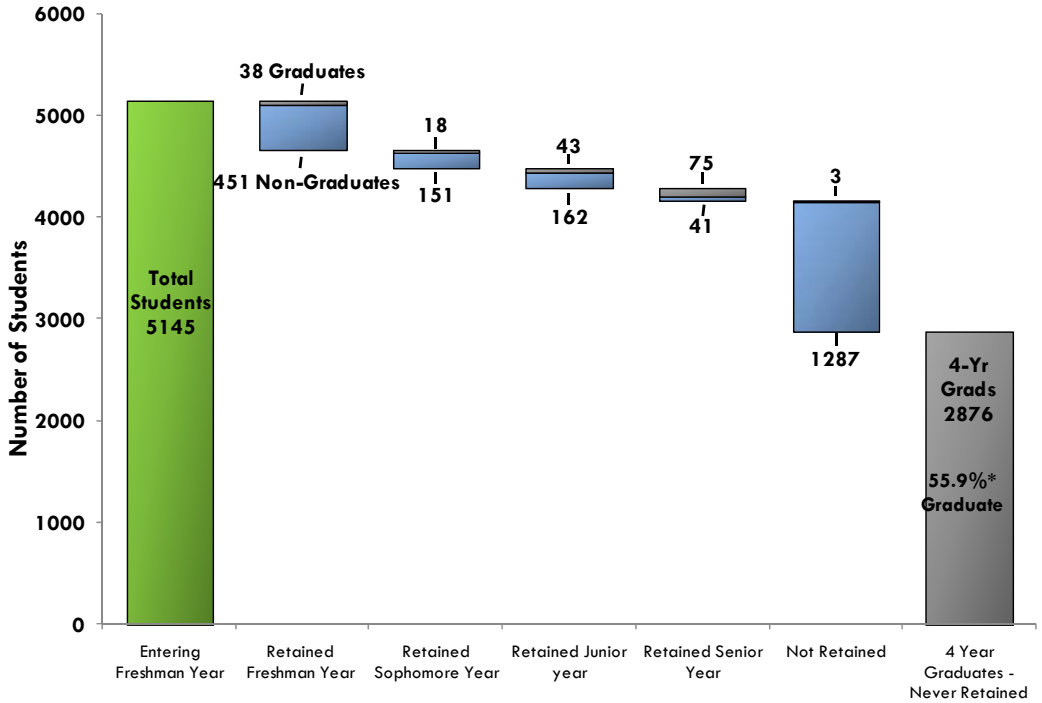


Chart 7 identifies the percent of students that graduated in four years and the percent of students that graduated after six years. The first column represents the 2891 students that graduated in four years (55.9%). While some students dropped out of high school during or after four years, other students continued in school for a fifth and six year of high school. After six years of high school, the overall graduation rate was 59.3 percent (3053 of 5145).

CHART 8

PROGRESSION OF STUDENTS

OVER FOUR YEARS



* This graduation rate differs from other slightly. This graduation rate is for students that graduated in 4 years that had never been retained. Some retained students, did graduate in 4 years.

Chart 8 presents the graduation rate for students who had never been retained and graduated high school in four years and those who were retained. The green bar (first bar) represent the total number of students at the beginning of 9th grade. The grey bar at the end represents the percent that graduated in four years, having never been retained. The four blue/grey bars in the middle represent those that were retained and the year the students were retained. In this case, the blue bottom of the bar represents the number of students who did not graduate, and the grey top represents the number of students who did graduate, despite being retained. Students who were retained, for the most part, did not graduate. The first blue/grey bar represents those students that did not graduate, despite not having been retained.

CHART 9

PERCENT OF EACH DIPLOMA TYPES ISSUED EACH YEAR

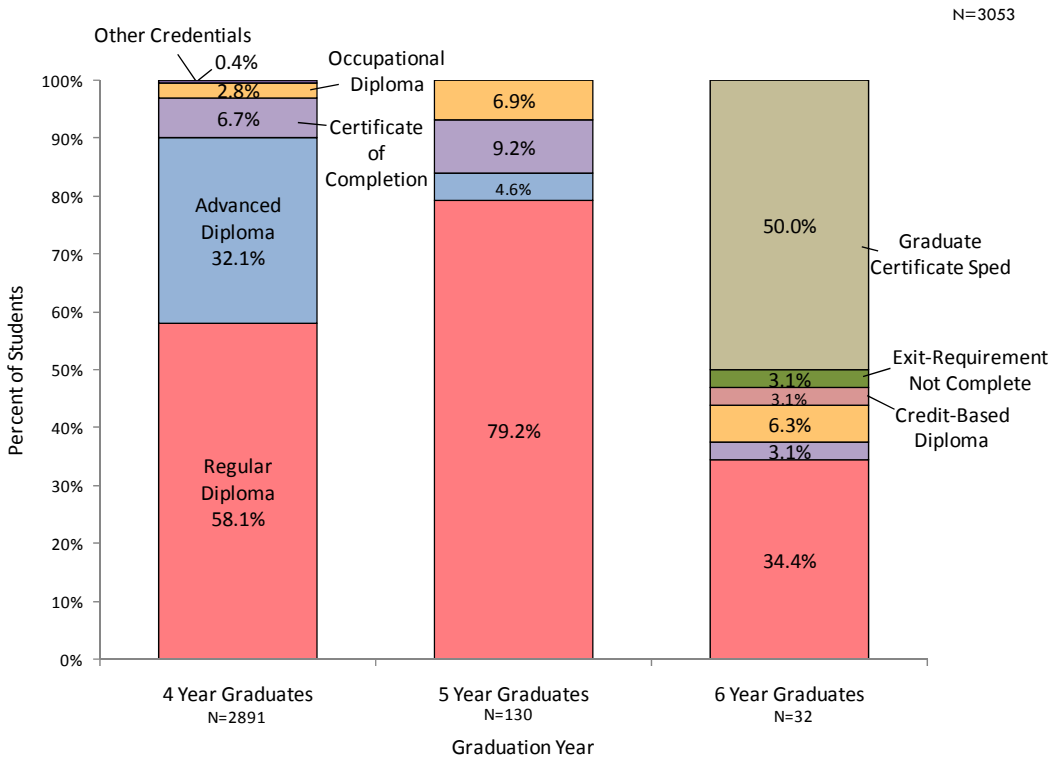


Chart 9 identifies the type of diploma issued to graduates. As identified in the chart, 58.1% of students who graduated within the first four years earned a Regular Diploma and 32.1 percent of diplomas were Advanced Diplomas. In the following year, 79.2 percent of graduating students earned a Regular Diploma. In the sixth year, 50 percent of diplomas were for special education students.

SECTION B: BECOMING OVER-AGED AND UNDER-CREDITED MATTERS

Section B of Part II identifies students that were over-aged *and* under-credited (OAUC) in high school. First, this section examines graduation outcomes for students that became OAUC after completing their freshman year of high school compared to those who did not. It then considers students that ever became OAUC during high school to those who did not. Graduation outcomes for students that are ever OAUC are then examined by high school.

The report then delves into the demographic information of students that are ever OAUC in high school.

Students have a significantly lower probability of graduating if they become over-aged *and* under-credited after freshman year of high school. Over-aged *and* under-credited is defined as being two or more years behind in age and credits. The specific criteria are as follows:

Age	Credits
Age 16	Fewer than 7 Credits
Age 17	Fewer than 14 Credits
Age 18	Fewer than 21 Credits
Age 19-21	Fewer than 28

CHART 10

OVER-AGED AND UNDER-CREDITED

AFTER FIRST YEAR OF HIGH SCHOOL

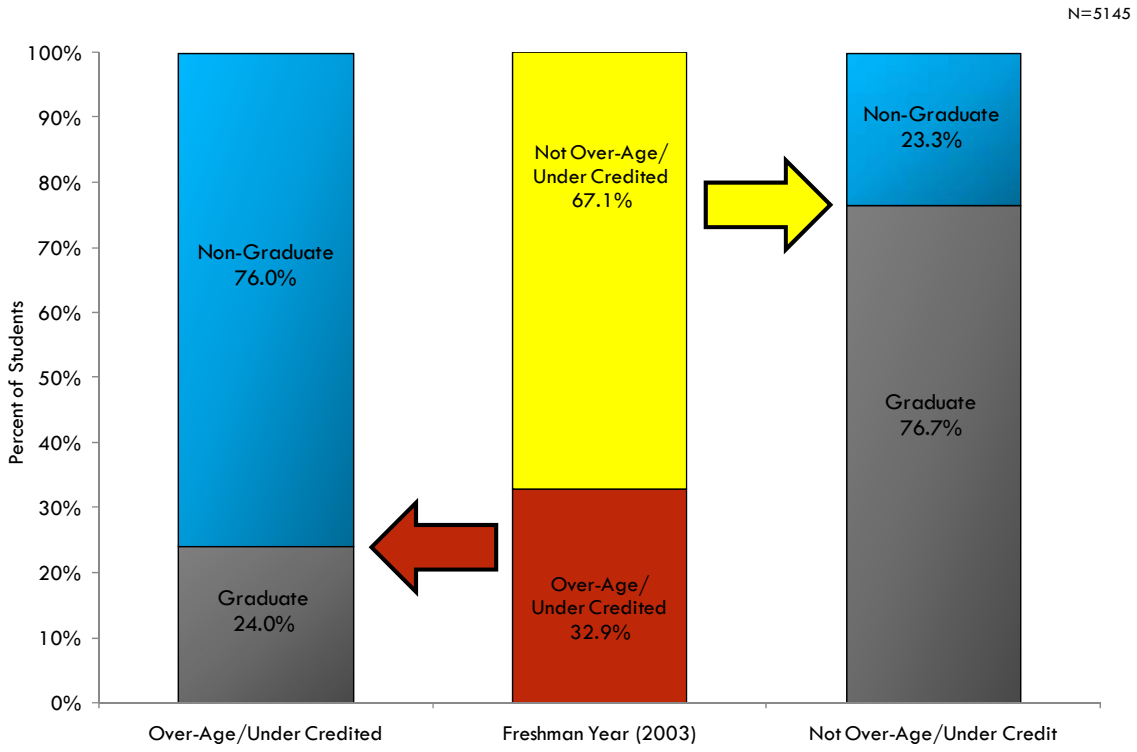


Chart 10 shows the difference between those who were not over-aged *and* under-credited after their first year of high school (in yellow), from those who became over-aged *and* under-credited after their first year (in red). Following the appropriately colored arrow in their respective directions, students who were not over-aged *and* under-credited after their first year of high school (yellow) have a graduation rate of 76.7 percent (2,647 of 3,452) which is identified in the

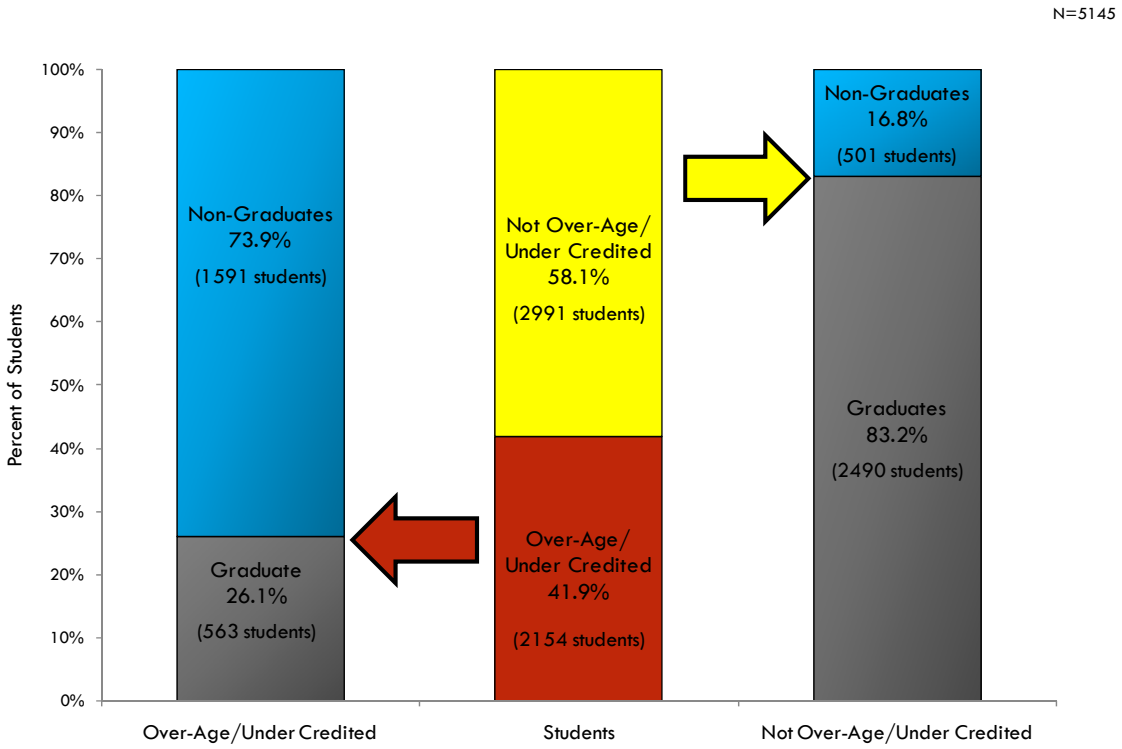
grey section of the bar on the right. Following the red arrow to left, for students who did become over-aged *and* under-credited after their first year of high school, only 24.0 percent (406 of 1,693) graduated, and 76.0 percent (1,287 of 1,693) did not graduate. These rates are almost exact opposites.

A student who became OAUC at any time followed the same general pattern as those who were OAUC after their first year.

CHART 11

OVER-AGED AND UNDER-CREDITED

AT ANY TIME DURING HIGH SCHOOL



In the above chart, the same colors are used to represent the same populations as those in the previous chart. Students who never became OAUC are in yellow, and those who became OAUC at any time during the period are represented in red. Following the yellow colored arrows, students who never became OAUC graduated 83.2 percent of the time (2490 of 2991), while the red arrow points out that those that were OAUC at some point in high school graduate at a rate of 26.1 percent (563 of 2,154).

Examining the gender break-out of OAUC, the study found that males are more likely than females to become OAUC. Using un-weighted numbers, of the OAUC students 37.4 percent were female (805 of 2,154), and 62.6 percent were male (1,349 of 2,154). The sample over all was 47.6 percent female (2,451 of 5,145) and 52.4 percent male (2,694 of 5,145).

The patterns revealed by the second cohort correspond to those from the first part of the study regarding students who were retained in high school. Students who repeated a grade had a graduation rate of 17.8 percent (173 of 975). This is not surprising, as students who were retained were those who become over-aged *and* under-credited.

Chart 11 identifies the number of students from each high school who were OAUC at some point during high school.[7] This chart is divided into students who were OAUC and graduated, green bars, and students that are OAUC who did not graduate, red bars. In keeping with the findings of this report, students that were OAUC usually did not graduate.

CHART 12

PERCENT OF HIGH SCHOOL STUDENTS WHO ARE BOTH OVER-AGED AND UNDER-CREDITED

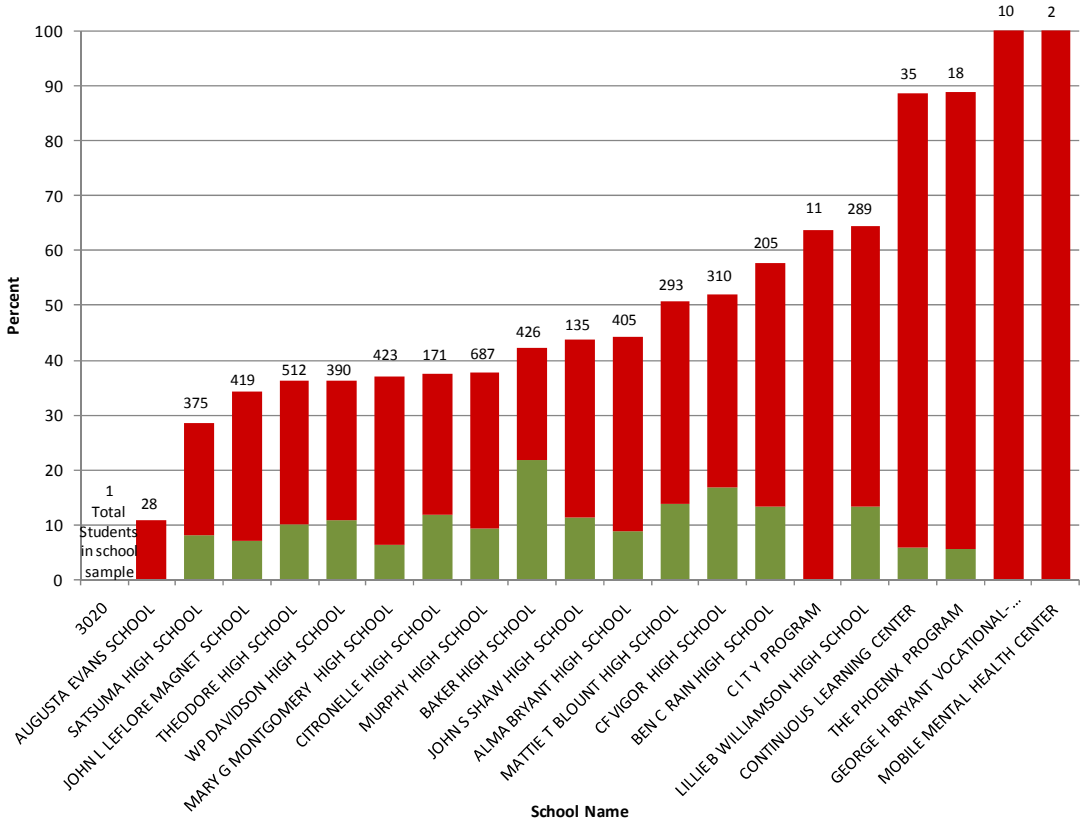


Chart 12 identifies the number of students who were OAUC as of June 2008. In total, 2,004 students are identified as OAUC. Of particular note is Baker High School. Within Baker High School, 42.3 percent (180 of 426) of the students are OAUC, and of this population more than fifty percent of these students graduate (51.1%, 92 of 180).

[7] School 3020 was unable to be matched to a specific school. The case was kept in the sample because all of the other data was usable.

CHART 13

OVER-AGED AND UNDER-CREDITED STUDENTS

2,004 Students are Over-Aged and Under-Credited

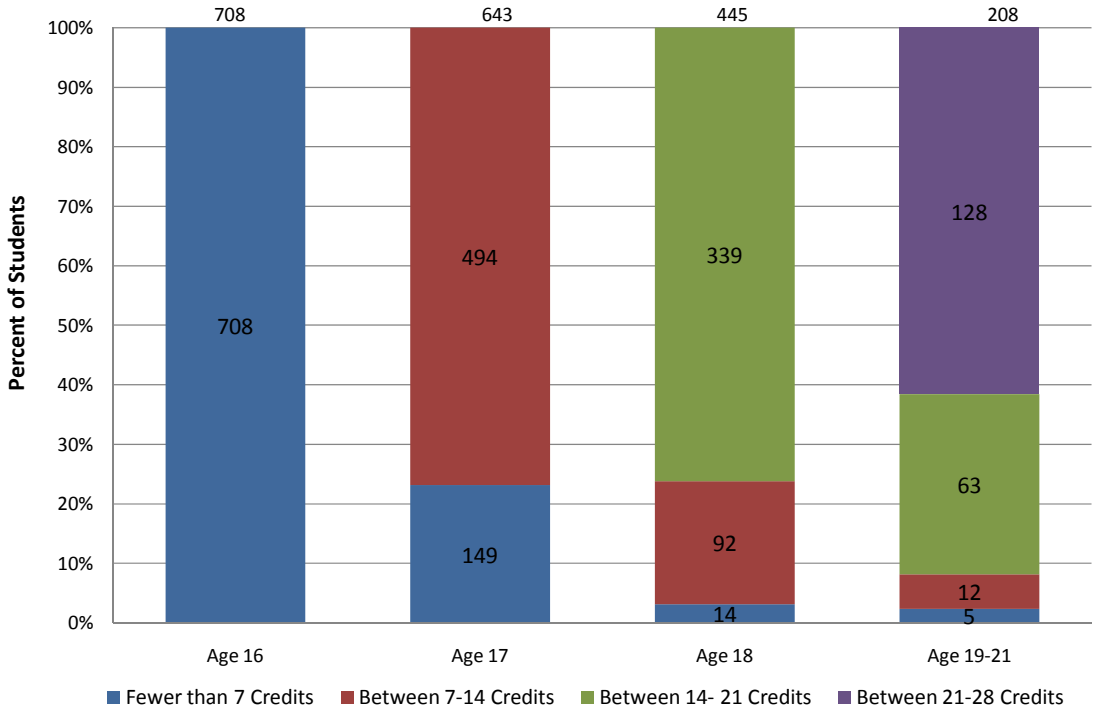
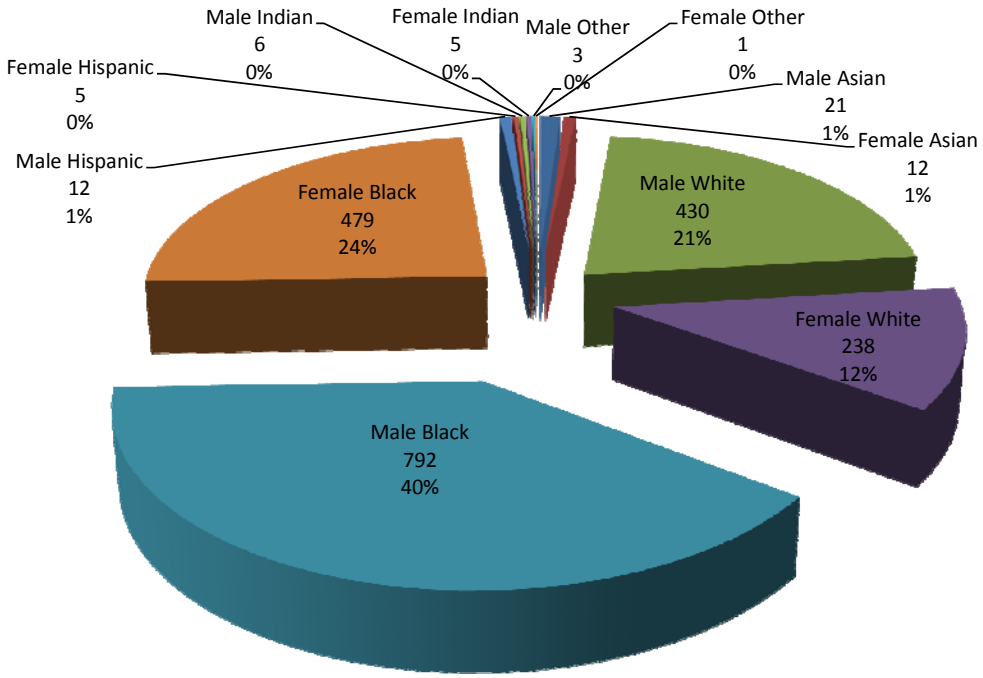


Chart 13 shows that 2004 students were OAUC in June 2008. The majority of students OAUC in high school were between the ages of 16 and 17 (67.4%, 1351 of 2,004) and were less than half way to graduation (fewer than 14 credits). As age decreased, the number of students who are OAUC also decreased (708, 643, 445, 208 respectively). This is likely because students dropped out of high school.

CHART 14

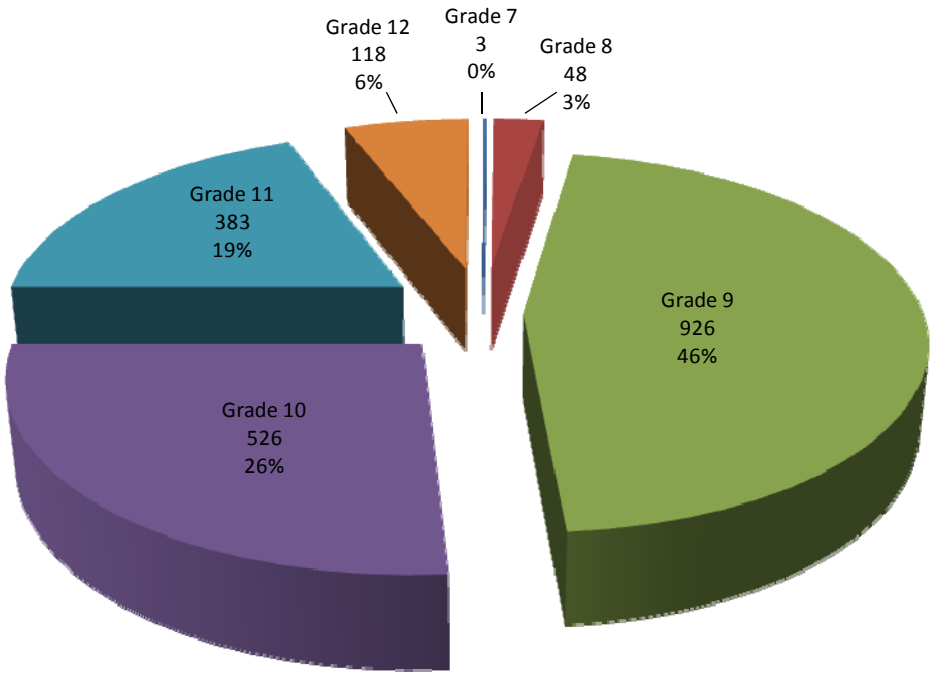
OVER-AGED AND UNDER-CREDITED BY RACE



When looking at Chart 14, the racial makeup of OAUC students, the vast majority of students were black (64%, 1271 of 2004), and white students constituted 33 percent (668 of 2004) of the population. Specifically, 40 percent (792 of 2004) of all OAUC students were black males. Black males are only about a quarter of the entire high school population.

CHART 15

OVER-AGED AND UNDER-CREDITED BY GRADE



According to Chart 15, the majority of OAUC students were classified as either in the 9th or 10th grade (72%, 1452 of 2004). Of special note, nearly half of all OAUC students (46%, 926 of 2004) were indicated as 9th graders. These students were nearly two years behind the rest of their graduating class – which should have been in the 11th grade.

RECOMMENDATION

Schools and communities should adopt best practices to better serve OAUC youth. These best practices should provide students with a variety of high quality educational options and supports.

Remaining Questions

This study is limited to the available administrative data provided. Additional research may reveal patterns underlying the indicators and identify root causes for differences in graduation rates and overall student success. Those root causes could provide policy makers with valuable information in addressing the needs of students identified by the indicators. Among the questions not answered in this study are the following:

1.) Are family characteristics related to graduation outcomes?

2.) Are students from specific neighborhoods more or less likely to graduate?

3.) Are extra-curricular activities related to graduation outcomes?

4.) Does attendance at specific elementary feeder schools impact student graduation rates?

5.) Do particular teachers impact student graduation outcome?

6.) Are student health issues related to absences and graduation outcomes?

Conclusion

The Public Affairs Research Council of Alabama (PARCA) analyzed student records from the Mobile County Public School System (MCPSS) for students starting in the 6th grade until they leave MCPSS. PARCA conducted a two part study. Part I revealed predictive indicators to identify students who are at-risk of not graduating. Part II was broken up into two sections. Section A provides an overview of graduation outcomes and reviews the effect of being held back one year on graduation. Section B compares graduation rates of those who were ever over-aged *and* under-credited to those who never became over-aged *and* under-credited in high school.

This study identified very clear trigger points where graduation rates drop sharply. Yellow Light and Red Light predictive indicators are unique gauges for identifying at-risk students. The

Yellow Light Indicators are as follows:

1) Missing 4-7 days of school in one year;
2) Receiving 1 out-of-school suspension[*];
3) Failing 1 core class[†] .

[*] PARCA received incident data from MCPSS. As such, the data recorded only the number of out-of-school suspensions a student received and not the severity of each out-of-school suspension.

The Red Light Indicators are as follows:

1) Missing 8-17 days of school in one year;
2) Receiving 2 out-of-school suspensions;
3) Failing 2 core classes.

A detailed analysis of the data revealed that students have only one of the three possible triggers in either the Yellow or Red Light category, not more than one. For example, a student will likely have multiple absences – 5 missed school days, but that same student will not have an out-of-school suspension or have failed one core class. The thresholds for indicators are based on the natural breaks between groups of students for each identifier.

[†] Middle School core classes were identified by using the "Promotional Retention Policy". High school core classes were identified using the "educational Planning Guide for Students".

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APPENDIX

WHEN DO STUDENTS GRADUATE?

The following section provides further examination of graduation outcomes based on the length of time it takes students to graduate or exit high school.

CHART A1

GRADUATION RATES FOR STUDENTS

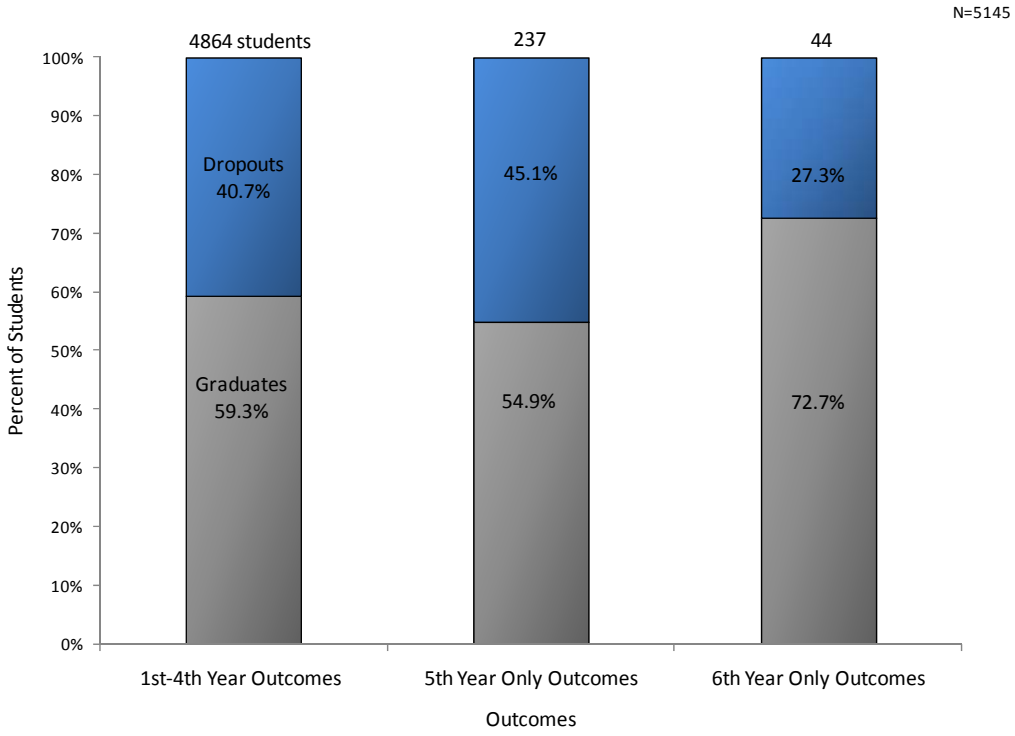
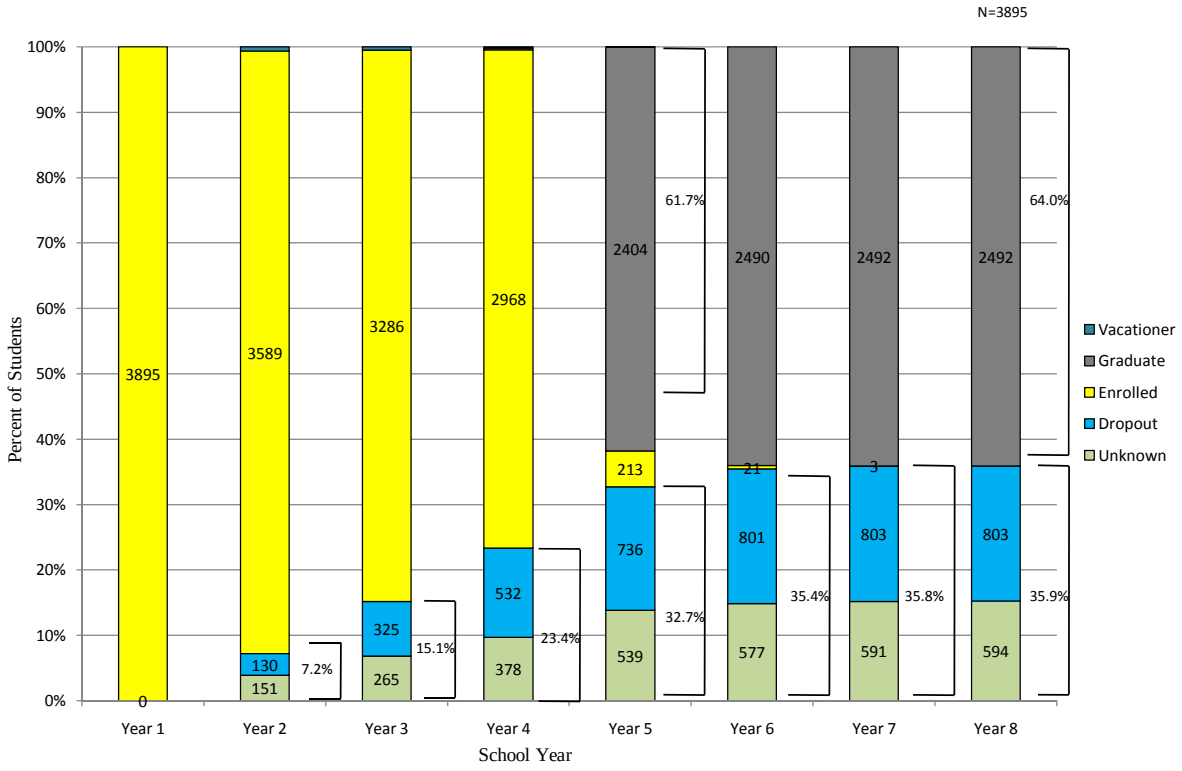


Chart A1 identifies student outcomes for up to six years in high school. Within the first four years, 59.3 percent of the students in the cohort graduated. Of those students that exited high school during the fifth year, 54.9 percent graduated; and 72.7 percent of the students graduated that exited during their sixth year. Note, most of the students that remained in school and graduated after six years were most likely special education students. Special education students normally graduate after six years.

HOW LONG DO STUDENTS STAY IN HIGH SCHOOL?

CHART A2

9TH GRADE TIME IN TIME IN SCHOOL BEFORE LEAVING



As noted in Chart A2 After the first year of high school 7.2 percent (281 of 3,895) of students exited school and the exit percent increased by 7.9 percent (590 of 3,895) after the second year in school.[8] After the fourth year, when a student was typically 17 years old or older and most students graduated, the percent of exiting non-graduating students increased 9.3 percent (910 of 3895) - the largest increase in exiting non-graduates.

WHY DO STUDENTS LEAVE SCHOOL?

Records for non-graduates were coded as either having provided a reason for exiting (reason listed – RL*), or not having provided a reason for leaving (no reason listed – NRL*). Older students tended to have a withdrawal reason listed on their records for exiting school.

[8] Students that had an exit reason in their record are recorded as dropouts, while those that do not have an exit reason recorded are identified as unknown.

TABLE A1

WITHDRAWL FROM SCHOOL BY GRADE AND AGE REASON LISTED & NO REASON LISTED

		Grade: 6	7	8	9	10	11	12	Total	%w/in Age	%of Age
Age: 12	RL*	12							12	12.2%	
	NRL*	86							86	87.8%	
	Total	98							98		4.9%
13	RL	7	1						8	5.8%	
	NRL	73	58						131	94.2%	
	Total	80	59						139		6.9%
14	RL	5	7	4					16	10.5%	
	NRL	24	53	59					136	89.5%	
	Total	29	60	63					152		7.6%
15	RL	0	10	11	6				27	17.5%	
	NRL	1	24	67	35				127	82.5%	
	Total	1	34	78	41				154		7.7%
16	RL		2	15	50	8			75	36.2%	
	NRL		4	39	62	27			132	63.8%	
	Total		6	54	112	35			207		10.3%
17	RL			8	133	51	13		205	60.5%	
	NRL			5	75	31	23		134	39.5%	
	Total			13	208	82	36		339		16.8%
18	RL			2	91	81	77	22	273	63.6%	
	NRL			0	25	39	60	32	156	36.4%	
	Total			2	116	120	137	54	429		21.3%
19	RL				29	45	86	57	217	65.2%	
	NRL				5	17	39	55	116	34.8%	
	Total				34	62	125	112	333		16.5%
20	RL					4	28	31	63	50.0%	
	NRL					1	13	49	63	50.0%	
	Total					5	41	80	126		6.3%
21	RL					1	1	8	10	33.3%	
	NRL					0	2	18	20	66.7%	
	Total					1	3	26	30		1.5%
22	RL							1	1	16.7%	
	NRL							5	5	83.3%	
	Total							6	6		0.3%
	TOTAL	208	159	210	511	305	342	278	2013		
	Per. Of Total	10.3%	7.9%	10.4%	25.4%	15.2%	17.0%	13.8%	100.0%		

Table A1 identifies that 60.5 percent (205 of 339) of non-graduating 17 year-old students had a reason listed on their record for exiting school, compared to only 17.5 percent (27 of 154) of non-graduating 15 year-old students.

The rows highlighted in yellow identify the percent of older non-graduates who have an exit reason listed on their record, and the grades in which the majority of non-graduates exit school.

Table A2 goes one step further and identifies, by grade, exit reasons provided on students' records. The following exit codes are consistent throughout the State and are provided by the State. These codes cover a range of generic reasons as to why a student may exit school prior to graduating. Only students 16 years old or older may legally dropout of school.

TABLE A2

REASONS FOR WITHDRAWL FROM SCHOOL

Withdrawal Code	Grade »	6	7	8	9	10	11	12	Total	Non-descript
54.9%	NRL	184	139	170	202	115	137	159	1106	v
0.5%	Academic Difficulty	0	0	0	2	5	1	2	10	
0.1%	Behavior Problems	0	0	0	0	1	1	1	3	
2.3%	Disciplinary	2	3	2	17	10	7	6	47	
0.7%	Dislike of School	0	0	1	4	4	2	4	15	
0.5%	Dropout	0	0	0	0	2	4	5	11	v
0.4%	Employment	0	1	0	4	2	1	1	9	
0.2%	Expelled	0	1	1	2	0	0	0	4	
0.8%	Failed HS Exam	0	0	0	5	2	6	4	17	
0.6%	Health	1	0	1	2	3	3	2	12	
0.0%	Needed at Home	0	0	0	1	0	0	0	1	
3.5%	Other Known Reasons	0	0	0	14	12	28	17	71	v
0.4%	Out of St-Job Corps	0	0	0	5	2	1	0	8	
0.3%	Parental Influence	0	0	0	1	2	2	1	6	
0.1%	Physical Illness	0	0	0	2	0	0	0	2	
0.2%	Pregnancy	0	0	1	1	2	0	0	4	
6.5%	Reason Not Listed	0	0	0	64	32	27	7	130	v
1.8%	Reason Unknown	0	0	0	17	6	12	1	36	v
0.0%	Trans W/I School Grade	0	0	0	0	0	0	1	1	
9.1%	Trans W/I Sys-GED	0	0	3	50	46	60	25	184	
14.2%	Trans W/I Sys-Public	19	15	25	90	49	47	41	286	
0.8%	W/I St-Job Corps	0	0	0	14	3	0	0	17	
1.6%	Whereabouts Unknown	2	0	6	14	7	3	1	33	v
100.0%	Total	208	159	210	511	305	342	278	2013	

The highlighted areas of Table A2 identify the majority of reasons listed on non-graduating students' records. Over fifty percent (54.9%, 1,106 of 2,013) of students did not provide a reason (NRL) for exiting school, 14.2 percent (286 of 2,013) transferred to another public school within MCPSS, 9.1 percent (184 of 2,013) transferred to the GED system, 6.5 percent (130 of 2,013) had "Reason Not Listed", and 3.5 percent (71 of 2,013) had "Other Known Reason" listed. The checkmarks next to particular exit reasons bring attention to the number of reasons that do not provide any information as to why a student may have exited school prior to graduating. More than two-thirds (68.9%, 1,387 of 2,013) of non-graduates have non-descriptive exit reasons coded on their record.

WHAT HAPPENS TO STUDENTS WHO FAIL A CLASS

Students that fail a class in 6th grade do not necessarily fail multiple classes, but they are prone to failing multiple classes. Earlier it was identified that math class is the number one failed class. The following charts identify the number of classes failed by graduates and non-graduates, and follow students and their grades from 6th grade until they exit MCPSS.

TABLE A3

FAILED CLASSES BY GRADUATES AND NON-GRADUATES

No. of Classes Failed	No. of Total students	Non-Graduates	Graduates	Percent of Students Who Graduate
0	3,598	1,341	2,257	63%
1	320	208	112	35%
2	165	124	41	25%
3	85	64	21	25%
4	64	53	11	17%
5	73	62	11	15%

The pattern for 9th grade core classes is similar to that of 6th grade. From this example, it is obvious that there is a significant difference between those students who did not fail a core class and students who failed one core class. Students with one failed core class, indicated by the Yellow Light Indicator where success falls below 50 percent, have a 35 percent chance of graduating. For students who reach the Red Light Indicator, having failed two core classes, the chances of graduating falls 10 percent from the Yellow Light Indicator to 25 percent.

CHART A3

TREE OF 6TH GRADERS GROUPED INTO THOSE WHO DID AND DID NOT RECEIVE A GRADE OF F IN A CORE CLASS

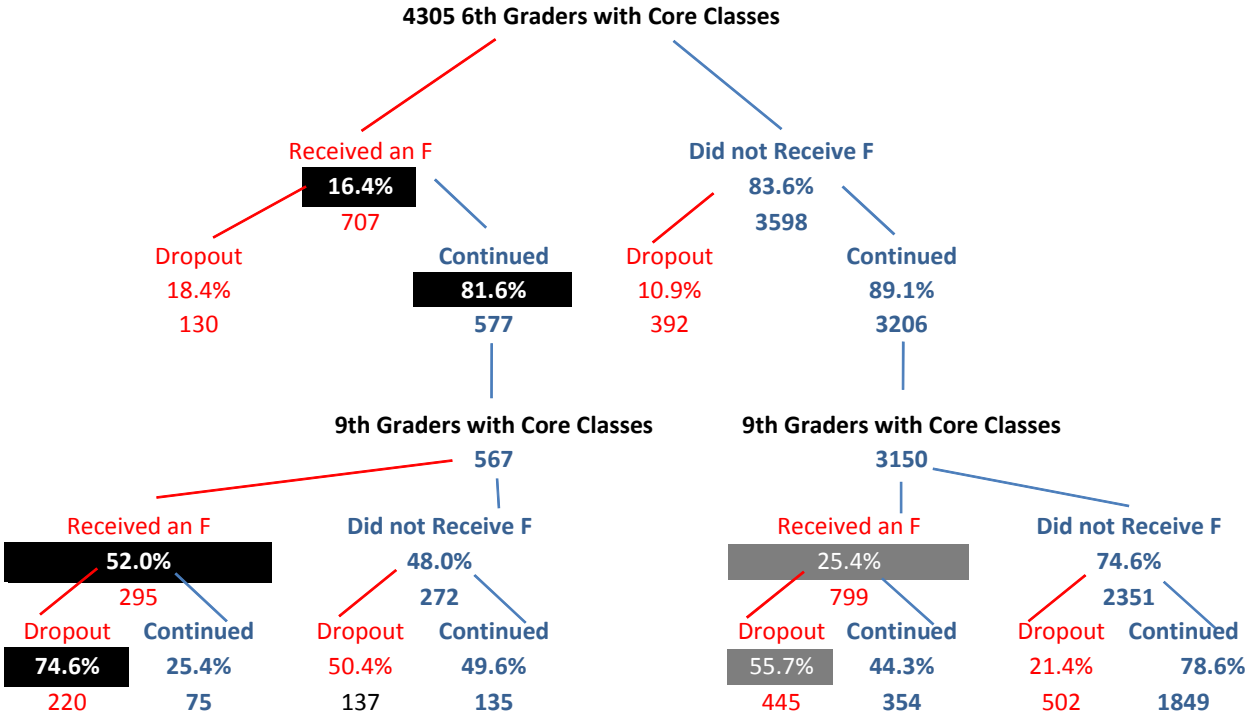


Chart A3 follows students from 6th grade to 9th grade. It identifies which students did and did not receive an F in 6th grade, and tracks whether students then received an F in 9th grade. Absent this chart, an argument might be made that students failing core classes in 6th grade are the same students who fail core classes in 9th grade. Chart A3 disputes this argument.

Starting at the beginning of Chart A3, there are 4,305 students with core classes in the first year of 6th grade. The left side of the tree identifies students that received an F in 6th grade (16.4%, 707 of 4,305). Following the black boxes down the left side of the tree highlights the path of those students who received an F in 6th and 9th grade. Of those students who received at least one F in 6th grade, 81.6 percent (577 of 707) continued into high school – of which only 567 had core classes in the first year of 9th grade. Of the 567 students that received an F in 6th grade and continued into high school, 52.0 percent (295 of 567) received at least one F in 9th grade. Of 295 students, 74.6 percent (220 of 295) did not graduate.

The right side of the chart identifies the 83.6 percent (3598 of 4,305) of students who did not fail a core class in 6th grade. Of the students who did not fail a core class in 6th grade and continued into high school (of which there were only 3,150 students with core class records), 25.4 percent (799 of 3,150) fail at least one core class. The boxes highlighted in grey recognize that a quarter of student (25.4%, 799 of 3,150) students who did not fail any core classes in 6th grade, did fail at least one core class in 9th grade. Of those students 55.7 percent (445 of 799) did not graduate.

Not all students that receive an F in 6th grade will receive an F in 9th grade. The same can be said in reverse; the students that failed a class in 9th grade did not necessarily fail a class in 6th grade. Only 27.0 percent (295 of 1,094) of students who received at least one F in 9th grade also received at least one F in class in 6th grade. Additionally, not all students that receive an F will drop-out of school, but there is an increased likelihood that a student who receives an F in 9th grade will drop-out of school.

TABLE A4

SPECIAL EDUCATION CODES

Code	Description	Recoded
SLD	Spec. Learn. Disability	Academic Issue
3	Over 21	Academic Issue
EC	Emotion. Conflicted	Emotional Issue
ED	Emotion Disturbed	Emotional Issues
GT	Gifted and Talented	Gifted and Talented
AUT	Autistic	Health/Physical Issue
HI	Hearing Impaired	Health/Physical Issue
MR	Mentally Retardation	Health/Physical Issue
OHI	Other Health Impair	Health/Physical Issue
OI	Orthoped. Impaired	Health/Physical Issue
SLI	Speech/Lang. Impaired	Health/Physical Issue
TBI	Traum. Brain Injury	Health/Physical Issue
VI	Visually Impaired	Health/Physical Issue
MD	Multiple Disabilities	Depends on surrounding codes, if none, coded as H/P

Table A4 identifies all of the possible special education codes provided by the district. Each code was grouped into one of four categories: Academic Issue, Emotional Issue, Gifted and Talented, or Health/Physical Issue.