RESEARCH BRIEF

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MIAMI-DADE COUNTY PUBLIC SCHOOLS
2002-2003 CROSS-SECTIONAL DROPOUT RATES AND LONGITUDINAL DROPOUT AND GRADUATION RATES

The District conducts a cross-sectional analysis of student dropouts annually; it examines dropout rates among students enrolled in various grades at one point in time. A longitudinal analysis, also conducted annually, tracks a group of students in the same grade or cohort over a period of several years. Each method addresses a different aspect of how many students are dropping out of school. The attached report provides information on the cross-sectional and longitudinal dropout rates for 2002-2003.

Dropout Definitions

The Florida Department of Education (FDOE) currently defines a dropout as a student who: (1) voluntarily removes himself or herself from the school system before graduation; (2) has not met the relevant attendance requirements of the school district, or the student's whereabouts are unknown; (3) has withdrawn from school but has not transferred to another public or private school; (4) has withdrawn from school because of hardship; or (5) is not eligible to attend school because of reaching the maximum age for an exceptional student program.

Cross-Sectional Analysis and Dropout Rate

The methodology used to determine cross-sectional dropout rate divides the number of students in grades 9 through 12 who are classified as dropouts by the total number of students in grades 9 through 12 in attendance at any time during the school year. The cross-sectional dropout rate is expressed as a percentage of the membership for the entire school year. The dropout rate for 2002-2003 across grades 9-12 was 3.8 percent. Table 1 includes a breakdown of the rates by grade and across grades for 2001-2002 and 2002-2003.

Table 1
Cross-Sectional Dropout Rates
for 2001-2002 and 2002-2003

Grade	2001-2002			2002-2003		
	2002 All Year Membership	No. of Dropouts	Dropout Rate	2003 All Year Membership	No. of Dropouts	Dropout Rate
9	39,640	2,288	5.8	40,061	1,802	1.5
10	29,683	1,455	4.9	30,377	948	3.1
11	23,698	1,047	4.4	24,353	769	3.2
12	22,443	997	4.4	23,231	933	4.0
9-12	115,464	5,784	5.0	118,022	4,452	3.8

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Cross-Sectional Rate by Gender

Table 2 includes a breakdown of the rates by gender and grade for 2001-2002 and 2002-2003. Consistent with previous local and national findings, female students were categorized as dropouts/truants less frequently than were male students. Specifically, the rate for 2002-2003 for female students in grades 9-12 was 3.3 percent. The rate for 2002-2003 for male students in grades 9-12 was 4.2 percent.

Table 2
Cross-Sectional Dropout Rates for
2001-2002 and 2002-2003 by Gender

Grade	Female		Male	
	2001-2002	2002-2003	2001-2002	2002-2003
9	5.2	3.8	6.3	5.1
10	4.0	2.5	5.7	3.7
11	3.9	2.7	5.0	3.6
12	3.9	4.1	5.0	3.9
9-12	4.4	3.3	5.6	4.2

Cross-Sectional Rate by Ethnic/Racial Background

White, Non-Hispanic students were categorized as dropouts less frequently than were either Hispanic or Black, Non-Hispanic students (Table 3). In examining the rate for White, Non-Hispanic students, it can be seen that the dropout rate for this group was 2.7 percent for grades 9-12 for 2002-2003. For Hispanic students, the rate for grades 9-12 was 3.2 percent for 2002-2003; and for Black, Non-Hispanics, the rate for students in grades 9-12 was 5.4 percent for 2002-2003. All racial/ethnic groups experienced reductions in the dropout rate from 2001-02 to 2002-03; the most substantial drop was noted for Hispanics, where rates decreased 1.4 percent (from 4.6% to 3.2%). Finally, the gap in dropout rates between Black, Non-Hispanic and White, Non-Hispanic students is narrowing.

Table 3
Cross-Sectional Dropout Rates by Race/Ethnicity

Grade	White, Non-Hispanic		Black, Non-Hispanic		Hispanic	
	2001-2002	2002-2003	2001-2002	2002-2003	2001-2002	2002-2003
9	3.8	3.7	7.5	6.0	5.3	3.9
10	4.1	2.4	6.0	4.2	4.5	2.7
11	2.8	2.2	5.7	4.2	4.2	2.8
12	1.8	1.9	6.2	7.3	4.1	2.8
9-12	3.2	2.7	6.5	5.4	4.6	3.2

Cross-Sectional Dropout Rates for Exceptional Student Education Programs

Given that grade level designations for exceptional students do not necessarily correspond to those used for other students, rates by program and across programs have been provided without regard to grade levels (Table 4). Please note that categories are differentiated by primary exceptionality and include students with a specific exceptionality, whether enrolled in an appropriate program or not. For the 2002-2003 school year, the cross-sectional dropout rate across all exceptional student education programs (excluding gifted) for all grades was 1.7 percent. This is a decrease from the 2001-2002 school year of 0.6 percent.

Table 4
Cross Sectional Dropout Rates for
Exceptional Student Education Programs,
All Grades

Exceptional Student Education Program	2001-2002		2002-2003	
	Oct. 2001 ESE Membership	Dropout Rate	October 2002 ESE Membership	Dropout Rate
Educable Mentally Handicapped (EMH)	2,855	2.5	2,785	2.7
Trainable Mentally Handicapped (TMH)	1,292	2.2	1,193	2.4
Physically Impaired - (also includes traumatic brain injured and other health impaired)	1,492	0.9	1,762	0.6
Speech Impaired	4,016	0.2	3,796	0.2
Language Impaired	684	0.4	658	0.2
Hearing Impaired	524	0.8	512	1.2
Visually Impaired	158	1.3	155	1.3
Emotionally Handicapped	3,803	4.5	3,818	3.5
Specific Learning Disability (SLD)	24,398	2.5	25,016	1.7
Profoundly Mentally Handicapped (PMH) - (also includes Autistic, Dual Sensory, and Severly Emotionally Handicapped)	3,301	2.6	3,413	2.0
Developmentally Delayed	1,124	0	1,259	0.1
Established Conditions	14	0	21	0
Gifted	24,433	0.5	24,718	0.3
Total	68,094	1.7	69,106	1.2
Total Excluding Gifted	43,661	2.3	44,388	1.7

Cross Sectional Dropout Rates for Limited English Proficient (LEP) Students

The dropout rate for grades 9-12 students classified as ESOL Levels 1-4 was 4.8 percent for 2002-2003 (Table 5). This is a decrease from the 2001-02 dropout rate of 6.6 percent.

Table 5
Cross-Sectional Dropout Rates for LEP Students

	2001-2002			2002-2003		
	All Year ESOL 1-4 Membership	No. of LEP Dropouts	LEP Dropout Rates	All Year ESOL 1-4 Membership	No. of LEP Dropouts	LEP Dropout Rates
9	4,643	248	5.3	4,308	202	4.7
10	3,411	237	6.9	3,235	106	3.3
11	2,302	168	7.3	2,142	84	3.9
12	1,582	134	8.5	1,604	150	9.4
9-12	11,938	787	6.6	11,289	542	4.8

Longitudinal Graduation Analysis and Dropout Rate

The longitudinal analysis tracks a single class over its high school career and retrospectively determines the proportion that dropped out and the proportion that graduated. The rates are reported as a percentage of the cohort group. As the cohort group advances through high school, withdrawals are dropped from the cohort group and transfers-in are added. This report focuses on two cohort groups: the students who started 9th grade in October 1998 (normally scheduled to graduate in June 2002) and the students who started 9th grade in October 1999 (normally scheduled to graduate in June 2003). The 1998 cohort was tracked an extra 5th year and the resultant 5-year dropout and graduation rates are reported separately.

The 4-year dropout rate decreased from 16.5 percent to 14.0 percent between the 1998 and 1999 cohort groups (Table 6). The 4-year graduation rate increased from 57.2 percent to 61.7 percent between the 1998 and 1999 cohort groups. The 5-year rates for the 1998 cohort group showed a slight decrease in dropouts and a 5.3 percent increase in graduates over this period.

Table 6
Longitudinal Dropout and Graduation Rates
for the 1998 Cohort and the 1999 Cohort Groups

Cohort	Final Cohort Membership	No. of Dropouts	Rate	No. of Graduates	Rate
1998-2002 (4-year)	26,677	4,400	16.5	15,264	57.2
1998-2003 (5-year)	26,677	4,382	16.4	16,676	62.5
1999-2003 (4-year)	26,745	3,740	14.0	16,508	61.7
Change in 4-year Rate			-2.5		+4.5

Longitudinal Rates by Ethnic/Racial Background

White, Non-Hispanic students had lower dropout and higher graduation rates than Hispanic students, who, in turn, had lower dropout and higher graduation rates than Black, Non-Hispanic students (Table 7). Improvement is evident in the 4-year rates from the 1998 cohort to the 1999 cohort group for both dropout and graduation. There was a considerable decrease in dropout rate and increase in graduation rate for Hispanics between the 4-year cohort groups.

Table 7
Longitudinal Dropout and Graduation Rates by Race/Ethnicity for the 1998 Cohort and the 1999 Cohort Groups

Cohort	White, Non-Hispanic	Black, Non-Hispanic	Hispanic
1998-2002 (4-year) Dropout Rate	13.8	16.9	17.1
1998-2002 (4-year) Graduation Rate	70.7	51.2	57.1
1998-2003 (5-year) Dropout Rate	13.8	16.8	17.0
1998-2003 (5-year) Graduation Rate	74.2	56.3	62.9
1999-2003 (4-year) Dropout Rate	12.4	15.4	13.7
1999-2003 (4-year) Graduation Rate	75.9	53.6	62.7

Change in 4-year Dropout Rate	-1.4	-1.5	-3.4
Change in 4-year Graduation Rate	+5.2	+2.4	+5.6

APPENDIX

Understanding the Dropout Rates

Understanding the Dropout Rates

Two Different Dropout Rates

The District uses two kinds of dropout statistics — the "cross-sectional" and the "longitudinal" dropout rates. The reported numbers for these two statistics are quite different. While the cross-sectional rates hover around 5 percent, the longitudinal rates typically exceed 15 percent. Understandably, this can cause some confusion. Why have two different statistics? Which should I use? What is the *real* dropout rate?

Brief Definitions

In short, the cross-sectional dropout rate looks at the number of dropouts in a single year compared to the total high school population. The longitudinal dropout rate tracks a single class over it's high school career and retrospectively determines the proportion that dropped out. While these two approaches share many common elements, they are sufficiently different in makeup and intent that they are not easily related.

Different Indices, Different Uses

The Dow Jones, the NASDAQ, and the S&P 500 are all indices used to understand changes in the stock market. These indices have very different numerical values revealing different aspects of the underlying phenomena. There is little call to explain the common elements used in the construction of these indices and one is not considered more "right" than another. In a similar fashion, the cross-sectional and the longitudinal dropout rates are indices sensitive to different aspects of changes in dropout trends. Each is useful in it's own right and numerical differences between them are not indicative of inconsistencies in need of resolution.

Potential Decisions

When constructing a dropout statistic, certain methodological decisions have to be made.

- **Decisions of timing** — When are dropouts counted? When does the comparison group start and end?
- **Decisions of definition** — Who is a dropout? Who is an active student?
- **Decisions of relevance** — What is the frame of reference? Who gets included and excluded?

In each of these areas many reasonable answers are possible. Literally hundreds of sensible dropout statistics can be devised.

An Example Methodological Decision

For example, in the cross-sectional dropout rate, we divide the number of students in grades 9 through 12 who are classified as dropouts by the total number of students in grade 9 through 12 in attendance *at any time during the school year.* This divisor would include students who attend for only the first few months and then withdraw to another district. It would also include students who transfer-in late in the school year and attend for only the last few months. As such, this divisor is probably larger than the student

body on any given day during the year. Does this tend to make the dropout rate too low? Should we use some kind of average attendance figure instead?

Counterbalancing Decisions

On the other hand, the cross-sectional dropout rate includes all of the freshman who end their year classified as a dropout in the numerator of the statistic. Subsequent analysis reveals that a large proportion of these freshman return to school over the next few years and do not end up dropping out. So, if the cross-sectional rate classifies these "temporary" dropouts as real, is the cross-sectional rate too high?

A Matter of Choice

In fact, it doesn't make too much sense to consider the cross-sectional rate as being either too high or too low. There is no *definitive* cross-sectional rate. Many different methodological paths can be taken in the construction of a cross-sectional statistic, each resulting in a viable notion of dropout rate. One type of statistic is not inherently more real, accurate, or better than another.

A Sunny Analogy

Perhaps an analogy would make this clear. Imagine someone considering moving from Miami and interested in the number of sunny days per year in prospective relocation cities. How would one measure sunny days per year? Some might count a sunny day as one in which there is at least one continuous hour of sunlight at the location of the courthouse. Another might define a sunny day as more than four hours of total sunlight at city hall. It is easy to imagine many other reasonable definitions. Each definition would result in a different sunny-day statistic for any particular city. As long as reasonable decisions were made, any of the measures could be useful. All would be sensitive to the phenomenon of "sunniness," and all would conclude that El Paso has more sunny days than Portland.

Idiosyncratic Statistics

Almost all of the statistics we use in education involve similar decision-based idiosyncracies. A good example is the calculation of a student's grade point average. Should we weight honors courses more? Do we include bonus points? Questions such as these prompt us to compute more than one type of grade point average. Even such fundamental questions as the number of students in the district or the number of schools are often met with an "It depends" response that the uninitiated can find exasperating. It is inescapable that clarifications are necessary for clear communication.

What Guides the Choices?

When we construct a statistic, on what basis are the methodological decisions made? In some cases, it is simply a matter of convenience. There may be numbers that can be used as subproducts in the calculation procedure that are readily available and easily incorporated. Sometimes following convention

or precedent can result in real advantages. In other instances, certain choices are made expressly because they lead to unambiguous results with commonly understood contexts.

State Mandates

In the case of the cross-sectional and longitudinal dropout rates, there are more compelling reasons for making certain methodological decisions. In an effort to standardize these statistics across districts, the Florida Department of Education provides detailed specifications for their construction. Although even these specifications leave some room for interpretation, for the most part, we create these dropout statistics as we do because we must. The steps involved in their calculation are carefully laid out for us to follow. The results are measures of the dropout phenomena that are capable of being meaningfully compared across districts and over years.

Exit Codes

At the end of each school year, students are assigned one of several exit codes by the staff at the school. These codes are classified into a few meaningful categories during the generation of both types of dropout statistics according to the guidelines provided by the State. One of the seeds of confusion for consumers of the dropout statistics is the assumption that once a student is categorized as a dropout by this method they are thereafter labeled as such with no subsequent evaluation. This is hardly the case.

Temporary Classification

It is quite possible for a student to look very much like a dropout at the end of one year, return to school the next, dropout again in the following year, and end up graduating somewhere down the road. Students classified as dropouts at the end of any particular year are perhaps best thought of as “projected” or “assumed” dropouts. Some limited follow-up is conducted for the cross-sectional dropout calculations, but the stated intent of the cross-sectional approach is to report these year-end provisional status rates. In contrast, the longitudinal approach waits to interpret any yearly exit codes until the final status is determined for the student at the end of their four-year timeframe. In this sense, the counts are for different kinds of dropout students.

Reference Differences

The reference groups for the dropout statistics are also dissimilar. The longitudinal dropout procedure starts with a single cohort group of first-time 9th graders. Any other students in the 9th grade at the same time must be retained students and are counted in other cohort groups. As the cohort group advances through high school, withdrawals are dropped from the cohort group and transfers-in are added in accordance with State recommendations. This is in contrast to the cross-sectional procedures. There, the natural reference group is all students in the grade level, regardless of cohort-group membership. Any effort by an outsider who tries to reconcile the two dropout rates without

the ability to match and track students by identification numbers is bound to end in failure and confusion. Far from being a shortcoming of these statistics, it is part of their virtue that the cross-sectional and the longitudinal dropout rates provide independent perspectives.

Longitudinal Uses

The cross-sectional and longitudinal dropout rates are both useful statistics, with one sometimes being preferred over the other for special situations. The longitudinal analysis ends in a classification of the cohort group into one of three mutually exclusive categories: completion, dropout, or continuing student. This allows for the coordination of dropout and graduation rates. It also allows for extensions into a fifth-year graduation rate. However, these final determinations require an interpretation of many linked dropout and withdrawal codes for individual students over several reporting periods. The resultant statistic is very useful for tracking long-term changes in dropout patterns.

Cross-sectional Uses

The cross-sectional rate, on the other hand, is computed with all same-year data. Because of this, it is highly responsive to short-term dropout fluctuations and suitable for monitoring the effectiveness of ongoing dropout prevention programs. Additionally, it is possible to decompose the cross-sectional dropout rate into rates for individual schools. The different statistics naturally appeal to different users depending on context.