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Division of Research and Evaluation
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Development of a High School Completion Indicator

The Academic Excellence Indicator System (AEIS) provides the structure of accountability for public schools in Texas. Since the AEIS was established in 1990-91, a wide range of information on each public school and district in Texas has been assembled and disseminated to the public in annual AEIS reports. Student performance indicators, disaggregated by ethnicity, gender, participation in special education, and socioeconomic status, are important components of the AEIS. In addition, the reports provide extensive information on school and district staff, finances, programs, and demographics. The performance indicators have included annual dropout rates since 1990, high school completion and longitudinal dropout rates in 1998 and 1999, and longitudinal completion/student states rates since 2000.

The accountability rating system for Texas public schools and school districts uses a subset of the performance indicators computed for AEIS to assign an annual rating to each public school and district. Indicators used for ratings are referred to as "base indicators." Schools and districts have been rated since 1994 using this system. An annual dropout rate has been a base indicator since the rating system was introduced. Beginning in 2004, a high school completion rate will be incorporated in the rating system.

The quantitative measure for each AEIS indicator is a product of extensive development by Texas Education Agency (TEA) staff, guided by educators, legislators, and business leaders, and grounded in AEIS principles (TEA, 1996, 2001b). One principle of AEIS is accountability for all students, but because the indicators differ, the counts and groups of students included in the measures differ somewhat. For example, the indicators related to passing the Texas Assessment of Academic Skills (TAAS) include all students enrolled on the last Friday in October, whereas the annual dropout rates are based on all students in attendance during the year. In the course of developing the longitudinal student status rates as measures of the high school completion rate indicator, agency staff analyzed the counts and characteristics of students included in the measures. In this paper, comparisons of starting cohort members and transfer students are reported.

Construction of Longitudinal Student Status Rates

In the longitudinal student status rate series developed by the agency, a "starting cohort" is established that includes every student in attendance in a Texas public school in the starting grade level for the first time in the cohort year. For example, the 1996-97 starting cohort for Grade 9 includes every student in attendance in Grade 9 for the first time in 1996-97. Students in Grade 9 for the second or third time in a Texas public school are not included—they are members of earlier cohorts. The agency does not maintain records of students other than those attending Texas public schools. As a result, the starting cohort

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includes some students who attended Grade 9 previously in private school or out of state because they appear to be first-time Grade 9 students.

Students who transfer into Texas public schools at the expected grade levels join the cohort as new members as the cohort progresses through high school. For example, Grade 10 transfers-in in 1997-98, Grade 11 transfers-in in 1998-99, and Grade 12 transfers-in in 1999-00 will join the students who began Grade 9 in 1996-97 (Figure 1). Grade 7 cohorts are constructed based on similar rules. The analyses in this paper focus on Grade 9 cohorts.

Starting cohort First-time Grade 9 students 1996-97 306,884 Transfer cohort Grade 10 1997-98 Grade 11 1998-99 Grade 12 1999-00 33.466 1996-97 cohort 340.350 Transfers-out and students without final statuses Transfers-out Under-reported Reporting errors 95.573 Students with final statuses Class of 2000 244.777 Graduate 197,579 Receive GED^a 11,648 Continue high school 17,821 Drop out 17,729

Figure 1. Starting and Transfer Membership in the Grade 9 Cohort and Class, Texas Public School, Class of 2000

^aGED = General Educational Development certificate.

Based on the rules establishing cohort membership, the "cohort" consists of every student in attendance in that grade level for the first time in a Texas public school, and every student who transfers into a Texas public school at the expected grade level as the cohort progresses through high school. Every student in Texas public high school is a member of one and only one grade-level cohort. That is, each student is a

member of one and only one Grade 7 cohort, and one and only one Grade 9 cohort. This feature is essential to an accountability indicator used year after year.

In calculations that can not or do not distinguish between first-time and retained students, retained students are members of two or more cohorts and are included two or more times in counts of outcomes. "One-time" longitudinal studies are often based on cohorts made up of all students in the grade level of interest, regardless of retention status. Because a student who repeats a grade is much more likely to drop out than a student who does not repeat a grade, the dropout counts are much higher in longitudinal rates that do not remove retained students from starting cohorts than in longitudinal rates that do remove retained students from starting cohorts. Rates based on cohorts made up of all students in the starting grade are not comparable to rates based on cohorts made up of students in the starting grade for the first time

A "class" consists of every student in the cohort with a "final status". Currently, the final statuses are graduate, continuing student, General Educational Development (GED) recipient, and dropout. Final statuses are determined the fall of the school year following expected graduation. There are no distinctions in cohort or class membership between students who begin with starting cohorts and students who transfer in.

"Official leavers" do not have any of the four final statuses that qualify for inclusion in a class. Because official leavers are not considered to have final statuses, they are not included in longitudinal student status rates. Students for whom final statuses are not reported are also removed from the class.

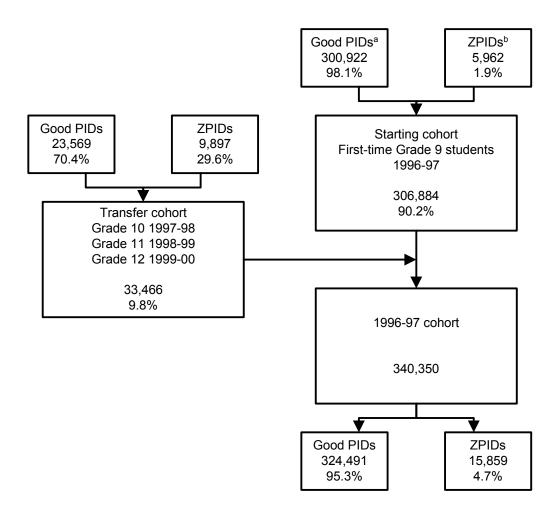
The class constitutes the denominator of all longitudinal student status rate calculations. Counts of students in each of the final status categories constitute the four numerators in the longitudinal rate calculations: graduates, continuing students, GED recipients, and dropouts. Each student status rate is calculated by dividing the count of students with the status by the total number of students in the class. Because the sum of all students with final statuses is equal to the number of students in the class, the sum of the four longitudinal student status rates equals 100 percent.

Data Sources

The analyses in this report are based on the most recent data available: members of the 1996-97 Grade 9 cohort and members of the class of 2000. Data on GED recipients from GED testing centers are transmitted to TEA. All other student data are reported to the agency by the districts through the Public Education Information Management System (PEIMS). Districts provide student data to the agency annually on enrollment, attendance, and school leavers (TEA 1996, 1997, 1998, 1999, 2000). Students leaving school are designated by the agency as graduates, dropouts, or other leavers (TEA, 2001a).

All student records reported to the agency contain information that uniquely identifies each student and enables the agency to identify and link records for students across years. Student identification is based on first name, last name, date of birth, and a student identification number, which may be either a social security number or an alternative identification number. The agency assigns a unique personal identification (PID) number to each student based on the four identification fields. PIDs are used to link records across years. GED records are also matched based on PIDs. PEIMS student records with errors in identification information are assigned ZPIDs. Records with ZPIDs cannot be matched to any other records in the student database. Because of the way transfers are determined, all ZPIDs are counted as transfers-in, but not all transfers-in are ZPIDs. About 2 percent of the student records of starting cohort members have ZPIDs (Figure 2). Of the students considered transfers-in, almost 30 percent have ZPIDs. Student records with ZPIDs are removed from the class and so are not used to calculate student status rates. All records with ZPIDs are removed from the cohort analyses that follow.

Figure 2. Student Records with Identification Errors, Texas Public School, 1996-97 Grade 9 Cohort



^aPID = personal identification number.

^bZPID = personal identification number for a record with identification errors.

Profiles of Starting Cohort Members and Transfer Students

The starting cohort for first-time Grade 9 students in Texas public schools in 1996-97 has 300,922 (92.7%) members, and 23,569 transfers-in (7.3%) with good PIDS. There are some differences in ethnicity—transfers-in have a higher proportion of White students and a lower proportion of Hispanic students than do starting cohort members (Table 1).

Table 1. Characteristics of Starting Cohort Members and Transfers-in, Texas Public Schools, 1996-97 Grade 9 Cohort

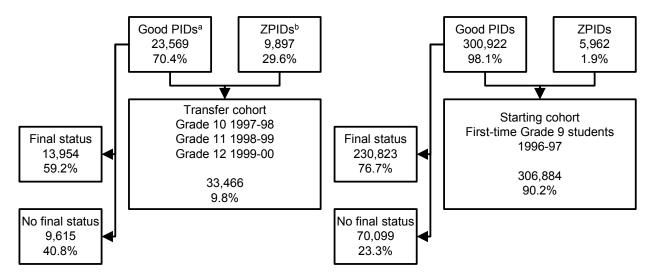
	Starting coh	ort members	Transfers-in		
Student characteristic	Number	Percent	Number	Percent	
African American	41,491	13.8	3,144	13.3	
Asian	7,544	2.5	1,621	6.9	
Hispanic	110,424	36.7	5,996	25.4	
Native American	786	0.3	149	0.6	
White	140,677	46.8	12,659	53.7	
Economically					
disadvantaged	96,758	32.2	4,138	17.6	
Female	146,126	48.6	11,863	50.3	
Male	154,796	51.4	11,706	49.7	
Limited English					
proficient	17,411	5.8	1,655	7.0	
At risk	133,782	44.5	5,634	23.9	
Immigrant	3,502	1.2	989	4.2	
Migrant	5,700	1.9	169	0.7	
All students	300,922		23,569		

The most noticeable differences are characteristics and programs related to socioeconomic status. Transfers-in are much less likely to be reported as economically disadvantaged, at risk of dropping out, and eligible for Title I (Tables 1 and 2).

Table 2. Program Participation of Starting Cohort Members and Transfers-in, Texas Public Schools, 1996-97 Grade 9 Cohort

	Starting coh	ort members	Transfers-in		
Program participation	Number	Percent	Number	Percent	
Special education	35,505	11.8	1,258	5.3	
Career and technology	92,769	30.8	5,089	21.6	
Bilingual	50	<0.1	4	<0.1	
English as a second language	13,209	4.4	1,437	6.1	
Gifted and talented	28,384	9.4	839	3.6	
Title I	75,877	25.2	3,086	13.1	
All students	300,922		23,569		

Figure 3. Starting Cohort Members and Transfers With Final Statuses, Texas Public Schools, 1996-97 Grade 9 Cohort



^aPID = personal identification number.

Members of the starting cohort are much more likely to have a final status than transfers-in (Figure 3). Of the students who are members of the starting cohort, 76.7 percent have final statuses, and of the students who are transfers-in, 59.2 percent have final statuses. Transfers-in appear much more likely to transfer out, to be underreported, or to be reported with incorrect student identification.

The final statuses of the transfers-in who do remain do not differ greatly from those of the starting cohort members (Table 3). Transfers-in are somewhat more likely to receive a GED or to continue in school after the expected year of graduation, and slightly more likely to drop out. The overall effect on the graduation rate is only about 0.2 percentage point statewide.

Table 3. Longitudinal Student Status Rates of Starting Cohort Members and Transfers-in, Grades 9-12, Texas Public Schools, Class of 2000

	Class	Gradu	ated	Receive	d GED ^a	Continu	ed HS ^b	Droppe	d out
Cohort	Number	Number	Rate %	Number	Rate %	Number	Rate %	Number	Rate %
Starting cohort	230,823	186,616	80.9	10,897	4.7	16,638	7.2	16,672	7.2
Transfers-in	13,954	10,963	78.6	751	5.4	1,183	8.5	1,057	7.6
All students	244,777	197,579	80.7	11,648	4.8	17,821	7.3	17,729	7.2

^aGeneral Educational Development certificate. ^bHigh school.

^bZPID = personal identification number for a record with identification errors.

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