High School Completion Rates: Investigating a Longitudinal Performance Measure for Texas Schools

Use of a longitudinal school completion rate as an indicator of school district performance has been discussed since the advent of the Academic Excellence Indicator System (AEIS) and the integrated accountability system. In August 1994 (see TEA, 1996a), the integrated accountability system, based on AEIS data and published decision-making rules, was used for the first time to determine campus and district accreditation status. Three types of indicators are used in the accountability system: (1) base indicators, (2) additional indicators, and (3) report-only indicators. Base indicators are those components of AEIS that are used to determine district accreditation. Additional indicators are used to determine acknowledgment ratings for districts and campuses. Report-only indicators are performance measures that are not statutorily required for use in accrediting districts, but are required for reporting in AEIS (TEA, 1996a).

One of the base indicators used in accrediting districts is the Grade 7-12 annual dropout rate. For the August 1994 rating, the annual dropout rates for all students and each student group (African American, Hispanic, White, and economically disadvantaged) were used in rating campuses and districts as *Exemplary* or *Recognized* only. In August 1995, when the annual dropout rate for Grades 7-12 was used to rate all districts and campuses, not just those in the *Exemplary* and *Recognized* categories, there was an interest from the field and public to explore an alternative measure of high school dropout. Critics of the annual dropout rate claim the indicator does not provide a "true" picture of what happens to a cohort of students through high school since the indicator only captures a "snapshot" of the high school career (Calderon, 1996). Educators and research groups have expressed their concerns for many years regarding the accuracy of an annual indicator in capturing what is truly happening through a student's school career (Arrigona, 1991; Cardenas, Robledo, & Supik, 1986; Ligon, Stewart, & Wilkinson, 1990). Criticism of the current dropout rate methodology has also increased in the past three years since the rate became a base indicator used to rate districts and campuses. However, changing from an annual dropout rate to a longitudinal school completion rate as a base indicator in the accountability system would require a change in statute.

In response to the recent criticisms of using the dropout rate as an indicator in the accountability system, the commissioner of education initiated a research study to investigate the possibility of replacing the dropout rate with a school completion rate.

This report provides an overview of school success indicators, along with an analysis of Texas data using a school completion methodology. The advantages and disadvantages of the proposed school completion methodology, along with issues related to incorporating the indicator into the Texas public education accountability system are also discussed.

Review of School Success/ Completion Indicators

There are several procedures used to estimate school success, which measure the proportion of students who either drop out of school or graduate. These procedures can be classified as annual indicators, estimated longitudinal indicators, status indicators, and longitudinal indicators. Each will be reviewed in turn.

An annual indicator measures what happens in a school over a one-year period of time. An example of an annual indicator is the dropout rate used in the accountability system for Texas public schools and school districts (TEA, 1996a). This dropout rate represents the proportion of 7th through 12th graders who are identified as dropouts, using a series of carefully defined criteria, during a given school year.

An example of an estimated longitudinal indicator is the graduation rate computed by the U.S. Department of Education. This measure divides the number of regular diploma recipients in a given school year by the number of students enrolled in the ninth grade four years earlier, as reported in the Common Core of Data (CCD; Clements, 1990). These rates are then adjusted for inter-state migration rates to reflect the movement of students in and out of each state; however, since the methodology does not track individual students, the resulting rates are only estimates.

A status indicator looks at a pool of people in a given age range, at a given point in time, and determines the proportion of persons who are not enrolled in high school and not high school graduates. For example, the National Center for Education Statistics (NCES) reported that 11.5 percent of 16 to 24 year-olds nationwide were not enrolled in high school and were not high school graduates in 1994 (McMillen & Kaufman, 1996).

The fourth type of estimate of school success looks at longitudinal data and determines, to the greatest extent possible, what has happened to a group of students, or cohort, over a given period of time by tracking individual students in that cohort. An example of a longitudinal measure is the Holding Power Index (Hartzell, McKay, & Frymier, 1992). Since it is the methodology investigated for replacing the dropout rate used in the Texas accountability system, it is discussed in further detail.

Holding Power Index

The Holding Power Index was originally conceived by William Denton of Dallas Independent School District and modified through work by Ruben Carriedo of the San Diego Unified School District, Sharon Johnson-Lewis of the Detroit Public Schools, and Larry Barber, Jack Frymier, and Neville Robertson of Phi Delta Kappa (Hartzell, McKay, & Frymier, 1992). The formula for the Holding Power Index measures a school's ability or power to "hold" students in school through graduation. Any student who graduates, obtains his or her GED certificate, or continues to be enrolled after Grade 12 can contribute to a school's "Holding Power" under this methodology. Although the index is a measure of a school's success at keeping students enrolled in school, it can also provide practical information to schools about the types of students they lose over a four-year period.

Definition

Seven assumptions underlie the formula for the Holding Power Index.

1. There is a relationship between what goes on at a high school and the percentage of students who graduate from that high school.
2. There are also factors beyond the control of the high school that contribute to a student's decision to leave early and schools should not be held accountable for those students.
3. The graduating class cohort is the appropriate unit of analysis in calculating the HPI for a school.
4. High school represents Grades 9-12.
5. Four years, starting with Grade 9 and ending with Grade 12, is the appropriate time frame for measuring dropout and graduation rates with the Holding Power Index.
6. A dropout is any student who cannot be accounted for at the time his or her graduating class reaches the end of 12th grade.
7. The HPI is defined as "the percentage of students in each graduating class cohort, including those who constitute the original membership of the cohort at the start of the ninth grade and those who subsequently transfer in, who graduate or are still enrolled when the cohort finishes grade 12" (Hartzell, McKay, & Frymier, 1992, p. 14).

Methodology

Given the assumptions behind the index, the HPI methodology requires tracking a cohort, or class of students, individually and determining each student's status at the end of Grade 12. The original cohort consists of first-time ninth graders in the starting year and adds any new students to the cohort each successive year. A student who transfers to a different public school is removed from his or her original cohort and added to the cohort in the student's new school. A student who transfers to a private school or a public school in another state is removed from the calculation of the Holding Power Index. At the end of four years, the cohort used in computing the denominator of the index consists of the original ninth grade cohort plus any students who have transferred in, minus any students who have transferred out. The numerator for the index consists of on-time graduates, early graduates, and students still enrolled. Since the methodology behind the Holding Power Index focuses on tracking students over a given time period, the status of a student is determined at the cohort's typical graduation date (four years after Grade 9).

Advantages and Disadvantages of a School Completion Rate

One of the advantages of reporting a longitudinal measure of success is that it is more consistent with the public's understanding of what a dropout or school completer is — someone who enters high school and, during the next four or five years, either com-

pletes the program or drops out. A longitudinal measure can be expected to be more stable over time than an annual measure. Fluctuations in a district's annual dropout rate may not necessarily reflect the success or failure of the district's dropout prevention program. Also, a school completion rate is a more positive indicator than the dropout rate, measuring school success instead of failure.

Another advantage of a longitudinal completion rate is the length of time schools have to encourage students to return and graduate from high school before they are held accountable for that student. Because the status of a student is not determined until the end of four years, schools have up to four years to bring dropouts back to school. Also, the status of a student who drops out of school to enroll in a GED preparation program can be determined before calculating a completion rate. Under the current dropout system, students are considered to be dropouts based on the type of GED preparation programs they enter at the time they withdraw from school. With a longitudinal methodology, whether or not a student receives a GED certificate could be determined before the completion rate is calculated.

Although tracking individual-level withdrawal information on students allows for much more flexibility in a school completion system, it may be burdensome for some schools to maintain such a system. One of the disadvantages of this methodology is the amount of staff and resources required to track students over time. For larger schools, and those with computer resources, this tracking of students may already replicate their current accounting system. Smaller schools, however, may not have the resources available to do this type of tracking. This could prevent some schools from computing their own completion rates and analyzing their own information about the types of students they lose over a four-year period.

In Texas, school districts submit individual staff and student-level information yearly to the Texas Education Agency (TEA) through the Public Education Information Management System (PEIMS). With these data, students can be tracked through the Texas public education system until they withdraw from the system. Although the current data collection process makes it relatively easy to calculate a school completion rate at the state level, using the Holding Power methodology, the next section provides a discussion of some of the issues that may influence the decision to use the indicator in Texas. These issues are related to the data used in calculating the index, the methodology of the index, and the process of transitioning the index into the school accountability system.

Incorporating a Completion Rate into the Texas Public School Accountability System

Data Collection Issues

Two issues are raised concerning the current collection of student-level data. One involves the manner in which dropout and graduate information are reported. Currently, each school district independently reports dropout and graduate information to the agency; student withdrawals that do not fall into either of these two categories are not reported. In the 4 years between the time they enter ninth grade and their class graduates, about 30 percent of each cohort withdraws from the Texas public school system without being reported as a dropout or graduate. Such "self-reported" data allow for variability in the interpretation of the definition of a dropout or graduate, which in turn may create variability among districts in who gets reported. As a result, unreported student withdrawals could include unreported dropouts. To fully implement a longitudinal school completion rate and apply it consistently across districts, information needs to be collected on all students withdrawing from the Texas public education system, not just dropouts and graduates. The definition of a completer and a dropout could then be determined at the state level and applied consistently across all districts. This would make the completion rate more equitable across districts and help compensate for the flaws that may be present in self-reported data.

The second issue with the current data collection is related to the PEIMS person identification (PID) system. Each student has a master PID record that includes basic demographic information that does not typically change over time (gender, ethnicity, birthdate, and name). If the basic identification information on a student data record submitted by a district does not match the PID record, that data record is flagged and given an alternate PEIMS identification number. Annual processing of data can occur even when alternate identification numbers are used, but cross-year processing becomes problematic because alternate identification numbers only apply to a specific data collection, within a specific year. A student who cannot be linked from one year to the next may appear to have withdrawn from the public education system and would not be included in the calculation of a school completion rate. If longitudinal data are to be used in the accountability system, accurate reporting of student demographic information will need to receive a greater emphasis in the PEIMS processing to ensure accurate

computation of school completion rates for Texas.

Methodological Issues

When calculating a school completion rate, criteria for deciding who belongs in the numerator need to be clearly defined. In the Holding Power Index, the definition of the numerator includes on-time graduates, early graduates, and students still enrolled. However, when students drop out of high school in Texas, some of these students complete their high school education by obtaining a GED certificate. This effort, to complete an alternative high school education, is reflected in the accountability system by not considering GED certificate recipients as dropouts. Therefore, in computing school completion rates for Texas, GED certificate recipients also might be considered school completers in the Holding Power formula. If GED certificate recipients are included in the numerator, the amount of time a student has to complete the GED certificate once they have withdrawn from school also will need to be decided.

Table 1. 1994-95 Completion Rates Based on Different Definitions of Completers

	Traditional Graduates	Graduates and Continuing Students	Graduates, GED Recipients, and Continuing Students
Number of Students	161,647	177,019	200,647
Completion Rate	70.8%	77.6%	87.9%

Source: TEA PEIMS (1990-91 – 1995-96)

In 1994-95, traditional graduates produced a completion rate of 70.8 percent. When different definitions of completers were applied to the state completion rate, the rate increased as high as 87.9 percent.

Table 1 shows the effect of different definitions on the state completion rate computed for 1994-95. Including only regular diploma recipients (early and on-time graduates) in the numerator produces a state completion rate of 70.8 percent. The rate increases to 77.6 percent if students who do not graduate but are still enrolled are included. Including non-traditional graduates, such as GED recipients, increases the state rate to 87.9 percent.

Another methodological issue is the treatment of students who transfer from district to district. As part of the methodology for the Holding Power Index, students who transfer in and out of a district throughout the four years also transfer in and out of the cohort within that district. The district to which the final status of that student is attributed is the last district the student attends rather than the first district. For example, a district that loses a student (i.e., due to a family move) after teaching him or her for the first three years of high school would not receive credit for the final graduation status of that student given the current computation of the indicator. Similarly, a dropout also would be attributed to the last district the student attended rather than the first district from which he or she dropped out.

For consistency with the current calculation of the dropout rate, it has been suggested that the school completion indicator should track a seventh grade cohort versus a ninth grade cohort. As with any longitudinal methodology, the length of tracking can compound any problems in the data. Using the example of the alternate personal identification numbers described above, this data problem would be compounded with each year of tracking. Therefore, tracking across four years versus six years (a seventh grade cohort) minimizes this problem. The impact of changes to the PEIMS Data Standards over time also would be minimized with a four-year tracking process. What is lost in tracking a ninth grade cohort are students who never make it to high school. The impact of losing seventh and eighth grade students before high school will not be reflected in a completion rate calculated for a ninth grade cohort.

A related methodological issue is the level of analysis used. Because the completion rate is a cumulative measure, it is only comparable for campuses that include all the grades covered in the rate. Most Texas high schools are Grade 9-12 schools. However, many smaller districts have Grade K-12 or Grade 7-12 schools. Completion rates based on a seventh grade cohort would not be comparable for Grade 9-12 schools and Grade 7-12 schools. Completion rates based on a ninth grade cohort would be comparable because both campus configurations include all the grades included in the calculation.

An argument can also be made for computing the completion rate only at the district level to enhance the equity of the accountability system. Middle

and high schools must meet standards on more indicators than elementary schools under the current accountability system, making it more difficult to achieve the highest accountability ratings. Yet the problems students face in secondary schools that result in dropping out, for example, often begin in elementary school. For this reason, it may be more equitable to compute measures such as the completion rate only at the district level. However, using a school completion rate only at the district level as a base indicator in the accountability system would require a change in statute.

Issues in the Transition to the Accountability System

The state accountability system is designed to improve student performance by: (1) being fair and recognizing student diversity; (2) recognizing high levels of performance and providing assistance to schools with inadequate performance; (3) complying with statutory requirements; (4) allowing flexibility at the local level in designing programs to meet the needs of the students; (5) relying on districts to develop and implement their own accountability systems that complement the state system; (6) supporting the public's right to know levels of student performance; and (7) providing a stable and realistic time line for measurement, data collection, planning, staff development, and reporting (TEA, 1996a).

Changing indicators in the accountability system disrupts the stability of the system and requires starting over to build trend data. However, this disruption is minimized by the phase-in process for new accountability indicators. New indicators are phased in over several years. Typically, the new indicators are first benchmarked for 1 year, reported for the next 2 years against a standard, and then used in the system to rate districts and campuses during the 4th year (TEA, 1996a). This process permits early identification of technical difficulties in a measure, allows districts and campuses to become comfortable with new indicators, and allows them to see how they compare to the standards before they are held accountable for them.

A longitudinal indicator is a new concept in the Texas accountability system. Current ratings are based on current and prior year data only, calculated annually. Including a longitudinal indicator in the system would require districts and campuses to be accountable for data submitted 4 or 6 years prior to the year it is used in the rating. Also, districts may object to being rated for students who dropped out 4 to 6 years earlier. Accountability appeals may extend across 6 years of data, based on either changes in the PEIMS Data Standards over the period included in the completion rate or on reporting errors from earlier years. Given the time required to resolve each appeal, it may be necessary to limit the range of appeals. Also, the impact of new dropout prevention and recovery programs would be reflected in a completion rate more gradually than an annual dropout rate because the completion rate for each year is based only on the class of students who began Grade 9 four years earlier, for example, rather than all Grade 9-12 students.

One of the biggest potential issues in transitioning to a school completion indicator is how districts and campuses will respond to the change. Due to the current accountability criteria and standards for small numbers of students, not all districts and campuses are required to meet the standards for the annual dropout rate. Switching to a completion rate could require more districts to achieve a standard they did not have to achieve before. (Only 351 of 1,044 districts had total dropout rates used for ratings in the 1996 accountability system; 704 districts would have had completion rates based on the data presented in this report.) If the completion rate is implemented at the campus level, not only more but different campuses would be rated. (The estimated 926 campuses with completion rates does not include all of the 694 campuses with total dropout rates used in the 1996 accountability ratings.) Although changing to an indicator that applies to more districts would be more equitable, it may not be well received by those districts who have an additional hurdle to achieve, even if sanctions are phased in over a 4-year period. Also, some districts and campuses with acceptable performance on the annual dropout rate indicator may not perform as well on the longitudinal completion rate. Based on districts who would have had a completion rate used in the 1996 accountability ratings, there is only a moderate correlation between district rankings on the two rates.

Another issue in transitioning to a school completion rate is the overlap between data used in the annual dropout rate and data used in the completion rate during the first few years after moving to a longitudinal measure. For example, the 1996-97 completion rate would include students who were in Grade 9 in 1993-94. Districts were held accountable for 1993-94 dropouts in the 1995 ratings and would be accountable for them again in the 1998 ratings if a school completion rate is used.

If student withdrawal information is collected, decisions need to be made about how to handle unreported withdrawals while that change is being phased in. If unreported withdrawals are treated as unreported

dropouts, school completion rates would start out artificially low and would improve as new data are incorporated. If unreported withdrawals are not treated as dropouts, completion rates would start out artificially high and would worsen as new data are incorporated, with the reporting deficiencies possibly offsetting any district gains made during that period of time.

Analysis of High School Completion Rates for Texas

Given the issues involved in switching to a school completion rate, the following assumptions and decision-making rules were applied to a preliminary analysis of Texas public school completion rates.

- Based on the recommendation of the Holding Power Index, and availability of data, a ninth grade cohort (rather than a seventh grade cohort) was followed through graduation.
- Unreported withdrawals were not treated as dropouts, but rather as students withdrawing from the Texas public education system.
- Students with alternate personal identification numbers were removed from the analysis (this consisted of about 20,000 students in the first cohort and 16,000 students in the second cohort).
- The final status of the student was attributed to the last district the student attended.
- Completion rates were calculated at the state and district levels only.

Completion Rate Analysis

Cohorts

Using the Holding Power methodology, two cohorts were studied in examining high school completion rates for Texas. The first cohort consisted of ninth grade students in 1990-91 who were followed through fall enrollment of 1994-95 (Cohort 1). Graduation and dropout statuses were established at the end of 1993-94 and students continuing their education for a 5th year were followed through fall enrollment of the 1994-95 school year. GED certificate recipients also were determined in the fall of 1994-95. The second cohort consisted of ninth grade students in 1991-92, who were followed through fall enrollment of the 1995-96 school year (Cohort 2). Graduation and dropout statuses were established at the end of 1994-95 and students continuing their education for a 5th year or receiving GED certificates were followed through fall enrollment of 1995-96. Table 2 shows the number of students who transferred into the cohort (i.e., from private school or another state public education system) over the 4-year period and the number of students who transferred out of the Texas public education system. Students transferring from district to district within Texas are reflected in the final numbers. As shown in Table 2, about 95,000 students transferred out of the Texas public education system in each cohort.

State-Level Analysis

Table 3 on Page 7 presents the state-level analysis of school completion rates for both cohorts, disaggregated by student ethnicity, gender, and socioeconomic status. For Cohort 1, the school completion rate was 86 percent, with 81 percent graduating, 11 percent receiving GEDs, and 8 percent of the cohort continuing high school for a 5th year. For Cohort 2, the school completion rate was 87.9 percent, with 80 percent graduating, 12 percent receiving GEDs, and 8 percent of the cohort continuing high school for a 5th year.

The state-level analysis by ethnicity shows that White students have the highest school completion rate in both cohorts, followed by other (Asian and Native American) minority students.

Table 2. Number of Students Transferring In and Out of the Texas Public Education System for Two Cohorts

	1993-94 Cohort 1	1994-95 Cohort 2
Original 9th Grade Cohort	272,326	285,028
Incoming 10th Graders	25,174	18,072
Incoming 11th Graders	10,873	12,596
Incoming 12th Graders	8,593	8,126
Total Cohort	316,966	323,822
Students transferring out of the Texas public school system	<94,290>	<95,567>
Final Cohort (minus students transferring out)	222,670	228,255

Source: TEA PEIMS (1990-91 – 1995-96)

About 95,000 students transferred out of the Texas public education system in each cohort.

Table 3. State Level School Completion Rates Disaggregated by Ethnicity, Gender, and Socioeconomic Status

	Cohort 1 (1993-94)			Cohort 2 (1994-95)		
	Final Cohort	Completers	Rate	Final Cohort	Completers	Rate
Ethnicity						
White	110,562	102,317	92.5%	114,020	106,691	93.6%
African American	30,224	23,826	78.8%	30,793	25,187	81.8%
Hispanic	75,616	59,630	78.9%	77,198	62,938	81.5%
Other	6,268	5,647	90.1%	6,244	5,831	93.4%
Gender						
Male	115,184	97,911	85.0%	117,465	102,007	86.8%
Female	107,486	93,509	87.0%	110,790	98,640	89.0%
Socioeconomic Status						
Economically Disadvantaged	61,866	48,837	78.9%	66,816	54,433	81.5%
Non-economically Disadvantaged	160,804	142,583	88.7%	161,439	146,214	90.6%
TOTAL	**222,670**	**191,420**	**86.0%**	**228,255**	**200,647**	**87.9%**

Source: TEA PEIMS (1990-91 – 1995-96

The completion rate for Cohort 1 was 86.0 percent and 87.9 percent for Cohort 2. Completion rates by ethnicity show that White students had the highest completion rate followed by other (Native American and Asian) minority students.

African American and Hispanic students have about the same completion rate in both cohorts. The school completion rate for females is about two percentage points higher than that for males in both cohorts. School completion rates disaggregated by socioeconomic status show that economically disadvantaged students have a lower school completion rate than non-economically disadvantaged students.

District-Level Analysis

One of the objectives of the state is to achieve a 95 percent school completion rate (TEC §11.205(d)). Table 4 on Page 8 presents the distribution of school completion rates across districts, disaggregated by student ethnicity, gender, and socioeconomic status. As shown in Table 4, 970 districts had completion rates for Cohort 1, ranging from 20 percent to 100 percent. Of these 970, 37.3 percent met the state goal of 95 percent. For Cohort 2, Table 4 shows that 968 districts had completion rates ranging from 50 percent to 100 percent. Of this cohort, 45.2 percent of the districts met the state goal of 95 percent.

The completion rates by ethnicity ranged from a low of 0 percent to a high of 100 percent. The greatest variation was found among the African American and Hispanic rates. The completion rates by gender also ranged from a low of 0 percent to a high of 100 percent. The completion rates for economically disadvantaged students ranged from 0 to 100 percent, but overall were lower than those for non-economically disadvantaged students.

From one cohort to the next, the completion rates for the same district varied considerably. One district went from a completion rate of 20 percent for Cohort 1 to a completion rate of 100 percent for Cohort 2. Another district went from a completion rate of 94 percent for Cohort 1 to a completion rate of 50 percent for Cohort 2. About 68 percent of the districts, however, either increased their completion rates or stayed the same. Although longitudinal measures are expected to be more stable over time, the variation seen with the two cohorts could be attributed to the variability of self-reported data. Collecting information on all students withdrawing from the Texas public education

Table 4. District Distribution of School Completion Rates Disaggregated by Ethnicity, Gender, and Socioeconomic Status

	Cohort 1 (1993-94)					Cohort 2 (1994-95)				
	Number of Districts	Lowest Rate	Median Rate	Highest Rate	Percent of Districts Meeting State Goal of 95%	Number of Districts	Lowest Rate	Median Rate	Highest Rate	Percent of Districts Meeting State Goal of 95%
Ethnicity										
White	962	66.7%	95.2%	100.0%	54.3%	958	0.0%	96.3%	100.0%	62.1%
African American	597	0.0%	94.1%	100.0%	48.9%	601	0.0%	100.0%	100.0%	53.6%
Hispanic	829	0.0%	89.7%	100.0%	39.9%	843	0.0%	92.3%	100.0%	45.6%
Other	358	0.0%	100.0%	100.0%	80.4%	361	0.0%	100.0%	100.0%	85.6%
Gender										
Male	969	0.0%	92.6%	100.0%	39.3%	968	50.0%	93.8%	100.0%	45.7%
Female	969	0.0%	93.2%	100.0%	42.6%	968	0.0%	94.4%	100.0%	49.7%
Socioeconomic Status										
Economically Disadvantaged	952	0.0%	87.5%	100.0%	33.4%	966	0.0%	89.7%	100.0%	36.3%
Non-economically Disadvantaged	966	50.0%	95.0%	100.0%	53.6%	966	0.0%	96.3%	100.0%	61.9%
TOTAL	**970**	**20.0%**	**92.6%**	**100.0%**	**37.3%**	**968**	**50.0%**	**93.9%**	**100.0%**	**45.2%**

Source: TEA PEIMS (1990-91 – 1995-96)

District completion rates for Cohort 1 ranged from 20 percent to 100 percent. For Cohort 2, completion rates ranged from 50 percent to 100 percent. Less than half of the districts met the state goal of 95 percent completion rate for each cohort.

system, and applying the definition of a completer and dropout at the state level, may help stabilize the indicator from year to year.

District Characteristics. Completion rates by district characteristics follow the same patterns as other school success indicators. The lowest completion rates are found in urban areas, where the highest dropout and retention rates are found. Minority and economically disadvantaged students also are found in greater numbers in urban areas, and their completion rates are lower than their nonminority and wealthier counterparts. As the percentages of students passing the Texas Assessment of Academic Skills (TAAS) test increases, so do the completion rates.

Comparison to the Annual Dropout Rate

When the school completion rate is compared to the annual dropout rate, conceptually the indicators are the reverse of each other — districts with high dropout rates have low completion rates and vice versa. Mathematically, the indicators are very different. Table 5 presents a simplified example of the calculation of a longitudinal dropout rate versus an annual dropout rate.

In the first example, the campus had a ninth grade enrollment of 100 students in 1992-93. After the first year, 20 students dropped out of school, leaving 80 students remaining in the cohort in 1993-94. During the second, third, and fourth years, 10 students dropped out of school each year, leaving 50 students remaining in the cohort in 1995-96. For the 1992-93 ninth grade cohort, the 1995-96 longitudinal dropout rate is 50 percent (the 50 students who dropped out divided by the 100 students in the original cohort). This tells you that a student entering the ninth grade in 1992-93 had a 50 percent chance of dropping out before completing high school.

In the second example, the annual dropout rate for the 1995-96 school year is 16 percent. This is because the denominator becomes the total number of students in Grades 9-12. In 1995-96, there is a ninth grade class of 100 students, plus a tenth grade class of 80 students, plus an eleventh grade class of 70 students, and a twelfth grade class of 60. If 20 students drop out from Grade 9 and 10 students drop out from each of the higher grades, the annual dropout rate is 50/310, or 16 percent. This tells you that 16 percent

Table 5. An Example of the Calculation of a Longitudinal Dropout Rate versus an Annual Dropout Rate

	Longitudinal Dropout Rate Graduating Class of 1995-96				
	1992-93 Grade 9	1993-94 Grade 10	1994-95 Grade 11	1995-96 Grade 12	Total
Number of Students	100	80	70	60	100
Number of Dropouts	20	10	10	10	50
Longitudinal Dropout Rate = (50/100) * 100 = 50%					
	Annual Dropout Rate 1995-96 School Year				
	1995-96 Grade 9	1995-96 Grade 10	1995-96 Grade 11	1995-96 Grade 12	Total
Number of Students	100	80	70	60	310
Number of Dropouts	20	10	10	10	50
Annual Dropout Rate = (50/310) * 100 = 16%					

Source: TEA PEIMS (1990-91 – 1995-96)

A longitudinal dropout rate tells the likelihood of any one student dropping out before he or she completes high school; whereas, an annual dropout rate tells how many students drop out during a particular school year.

of all Grade 9-12 students dropped out during the 1995-96 school year, but does not tell you the likelihood of any one student dropping out before he or she completes high school.

The patterns seen with a school completion rate reflect complementary patterns for the annual dropout rate. As a group, White students have the highest completion rate and the lowest dropout rate of all ethnic groups. Female students have slightly higher completion rates and slightly lower dropout rates than male students. Economically disadvantaged students also have the lowest completion rates and the highest dropout rates. Further analysis with other groups, such as students identified as being at risk, students receiving special education services, students who are overage for grade, and students with limited English proficiency, is likely to complement the same patterns seen with the state dropout rate (for an analysis of the state dropout rate the reader is referred to TEA, 1996b).

Conclusions and Future Directions

Recent interest in reexamining the dropout rate as an indicator in the Texas accountability system has led to research investigating other school success indicators, including a school completion rate. School success generally has been measured as a proportion of a group either completing or not completing high school. Some measures look at what happens in a school over a one-year period of time, while other measures examine what happens to a group of students, or cohort, over a longer period of time. The Holding Power Index is one measure that examines a cohort over a period of time and communicates the success, rather than the failure, of a school system.

The Holding Power Index measures a school's ability or power to hold students in school through graduation. This methodology tracks a class of students individually and determines each student's status at the end of Grade 12. Some of the advantages of this methodology include its ability to track individual student success over time and the consistency of the index with the general public's understanding of what a dropout or school completer is.

Although switching to a school completion rate provides districts and campuses with an indicator that communicates the success rather than the failure of a school system, calculating the indicator and incorporating it into the accountability system requires careful consideration from those most impacted by it. The implementation issues in regards to the current data collection, the methodology of the index, and the process of transitioning the index into the accountability system need to be considered to make sure districts and campuses are given the most equitable and accurate measure of school success.

An analysis of Texas school completion data using the Holding Power methodology shows results similar to those achieved with indicators such as the annual dropout rate and grade-level retention (TEA, 1996c). White students have higher completion rates than African American or Hispanic students, and female students have higher completion rates than male students. The lowest completion rates generally are found in the urban areas, that have enrolled higher concentrations of minority and economically disadvantaged students.

Although a school completion rate has advantages over an annual dropout rate as a performance indicator, it still maintains some of the same problems associated with the dropout rate. The current PEIMS collection of graduate and dropout information is self-reported annually by school districts. Switching to a collection of student withdrawal data will likely improve the methodology and reduce the bias of self-reported data. This also will ensure that standards are set consistently and objectively at the state level. Discussions currently are being held at the Texas Education Agency about collecting student withdrawal information, for implementation during the 1998-99 school year.

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