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Assessing Arizona’s Dropout Problem:

Why Current Measurement Methods are Flawed, and How to Fix Them

Policy Brief

by

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Assessing Arizona’s Dropout Problem: Why Current Measurement Methods are Flawed, and How to Fix Them

Teresa Huerta
Arizona State University

Introduction

Over the last half-century, a high school diploma has gone from being a valuable, but optional, asset in the labor market to the minimum educational requirement for entry-level employment. Completing high school is now mandatory for anyone seeking additional education, training, or all but the lowest paying and most menial of jobs.¹

Failing to complete high school has severe economic and social consequences for individuals and for society. Students who leave high school without a diploma forfeit a lifetime of opportunities, making it far more likely that their children will grow up in poverty and become “at risk” children.² Dropouts are more likely to be unemployed, and when they do find work, generally earn less money than high school graduates.³ They are more likely to receive public assistance than are high school graduates. In addition, high school dropouts constitute a disproportionate percentage of the nation’s prisoners and death row inmates. Each of these outcomes reflect not only individual costs to the dropout, but also costs to society as a whole through unemployment compensation, private charitable relief, public assistance, and the cost of correctional services.⁴

Dropouts also burden society with two additional costs: lower tax revenues, because of lower incomes, and decreased civic participation. The Arizona Minority Education Policy Analysis Center in its Spring 2002 report, Dropping Out of Arizona’s...
Schools, calculates that the state’s 21,472 dropouts from the Class of 2000 will cost local, state, and federal governments more than $4 billion in lost tax revenues over their lifetimes.\(^5\) Dropouts also have among the lowest rates of voting and civic participation.\(^6\) The erosion of an informed, active citizenry is dangerous to a democratic society, which depends on actively engaged citizens to make responsible civic choices.\(^7\)

For these reasons, gauging the proportion and distribution of high school dropouts in Arizona represents a critical public policy task. Preliminary evidence strongly suggests that Arizona has a significant dropout problem, yet that remains a matter of contention. Some underlying sources of that dispute are the state’s methods of collecting and reporting dropout data. The absence of a consistent, accurate, and reliable method of tracking dropout rates in Arizona makes it difficult for policymakers to assess the magnitude of the dropout problem and establish remedies.

This report reviews methods for collecting, analyzing, and reporting data on school dropouts and considers the strengths and weaknesses of those methods. It then examines Arizona’s available dropout data and the problems inherent in how the state collects and reports that data. Finally, it recommends two approaches to improving the accuracy, reliability, and utility of Arizona’s dropout and school completion data.

**Dropout Rates: National Measures**

The federal government and state governments use dropout and graduation rates to assess the success of schools and school districts in educating students for
postsecondary education and careers. The layperson’s definition of a dropout is a young adult who has left school without receiving a high school diploma. Seeking greater precision, researchers and policymakers employ various methods for measuring the number of students who drop out.\textsuperscript{8}

**National Dropout and Completion Rates**

The U.S. Department of Education’s National Center for Education Statistics (NCES) collects, analyzes, and reports national data on high school completion and dropout rates and breaks down that data along demographic lines, including race/ethnicity, gender, region of residence, and income level.\textsuperscript{9}

The NCES has developed five different measurements of dropouts, relying on different definitions, data sources, and methods of calculation.\textsuperscript{10} They are:

- **Status dropout rate-CPS:** The proportion of all young adults ages 16-24 who are not in high school and have not earned a high school diploma or GED.

- **Event (annual) dropout rate-CPS:** The proportion of young adults ages 15-24 who leave high school each year and have not earned a high school diploma or GED.

- **Event dropout rate-CCD:** The proportion of young adults ages 15-24 who leave high school each year and have not earned a high school diploma (NCES counts GED recipients as dropouts).

- **High school completion rate-CPS:** The proportion of young adults ages 18-24 who have not enrolled in high school and have earned a high school diploma or GED.

- **Longitudinal cohort dropout rate:** The proportion of students in a grade-level cohort, followed over time, who leave school without earning a high school diploma or GED.
Each measure has its particular advantages and disadvantages. The event dropout rate, for example, shows dropout trends from year to year. This makes it possible to ascertain whether the total population of dropouts is growing, shrinking, or staying about the same. However, it does not show the proportion of young adults who left school early.\textsuperscript{11} The status dropout rate provides this cumulative information, but cannot show dropout trends from year to year, as the event dropout rate does. Such distinctions are important because school completion and dropout rates can vary dramatically, depending on the data source and definition. These differences make it difficult to draw accurate and reliable comparisons between different sets of data, confounding policymakers’ attempts to assess the magnitude of the dropout problem.\textsuperscript{12}

During the 1970s and 1980s, U.S. high school dropout rates fell and completion rates rose.\textsuperscript{13} During the 1990s, however, rates stabilized. In October 2000, the national event dropout rate was 4.8 percent,\textsuperscript{14} The national status dropout rate was 10.9 percent.\textsuperscript{15} The national high school completion rate for the year 2000 was 86.5 percent (see Table 1 below).

Dropout rates vary among regions of the country and among ethnic groups. In 2000, for example, dropout rates were higher in the South and West than in the Midwest and Northeast.\textsuperscript{16} In addition, the national status dropout rate was considerably higher for Latinos than for other racial/ethnic groups (see Table 1 below). In October 2000, the NCES reported status dropout rates of 27.8 percent for Latinos, 13.1 percent for African Americans, 6.9 percent for Whites, and 3.8 percent for Asian/Pacific Islanders.\textsuperscript{17} Similar disparities among racial/ethnic groups exist for event dropout rates and high school completion rates.\textsuperscript{18}
<table>
<thead>
<tr>
<th>Dropout and Completion Measures</th>
<th>National Total</th>
<th>Latino</th>
<th>African American</th>
<th>White</th>
<th>Asian/Pacific Islander</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status Dropout Rate:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of 16- through 24-year-olds who were dropouts in 2000.</td>
<td>10.9%</td>
<td>27.8%</td>
<td>13.1%</td>
<td>6.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Event Dropout Rate:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of 15- through 24-year-olds who dropped out of grades 10-12 October 1999 to October 2000.</td>
<td>4.8%</td>
<td>7.4%</td>
<td>6.1%</td>
<td>4.1%</td>
<td>3.5%</td>
</tr>
<tr>
<td><strong>High School Completion Rate:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of 18- through 24-year-olds who had completed high school in 2000.</td>
<td>86.5%</td>
<td>64.1%</td>
<td>83.7%</td>
<td>91.8%</td>
<td>94.6%</td>
</tr>
</tbody>
</table>


The Status Dropout Rate-CPS

**Definition**

The National Center for Education Statistics (NCES) defines the status dropout rate-CPS as the proportion of all young adults ages 16-24 who are not in high school and have not earned a high school diploma or GED.¹⁹ The NCES calculates the status dropout rate-CPS from data in the Current Population Survey (CPS), a monthly survey of 50,000 households across the nation, scientifically selected to represent the civilian U.S. non-institutionalized population. In addition to providing national status dropout rates, the NCES uses the CPS data to calculate a three-year average status dropout rate for each state.

**Major Advantage**

- Provides a cumulative view of the current dropout situation nationally, by region, or by state. As such, the federal government uses it to determine the economic and social costs of dropouts.²⁰
**Major Disadvantage**

- Cannot assess school’s accountability because it counts as dropouts young adults who either never enrolled in school, or who did not necessarily drop out of school where they live now. Therefore, it cannot accurately show how well schools are preventing students from dropping out.

**The Event (Annual) Dropout Rate-CPS**

**Definition**

The National Center for Education Statistics (NCES) defines the event (annual) dropout rate-CPS as the proportion of young adults ages 15-24 who leave high school each year and have not earned a high school diploma or GED. Like the status dropout rate-CPS, the NCES derives the event (annual) dropout rate-CPS from data collected in the Current Population Survey (CPS).

**Major Advantage**

- Shows how many students ages 15-24 drop out of school each year. Therefore, it is useful in observing dropout trends.

**Major Disadvantage**

- Does not show the proportion of all young adults who left school without completing a high school program.

**The Event (Annual) Dropout Rate-CCD**

**Definition**

The National Center for Education Statistics (NCES) defines the event (annual) dropout rate-CCD as the proportion of young adults ages 15-24 who leave high school each year (not including students who transfer, are temporarily absent, or die) and have
not earned a high school diploma (NCES counts GED recipients as dropouts).\textsuperscript{22} It differs from the event (annual) dropout rate-CPS because it uses the Common Core of Data (CCD) instead of the Current Population Survey (CPS) as its data source. The NCES compiles the CCD from data that state education agencies collect annually from administrative records kept by schools and school districts within a state.\textsuperscript{23}

**Major Advantage**

- Relies on actual enrollment counts reported by state education agencies, not a sample survey.

**Major Disadvantage**

Limits comparisons among states because states vary in how they define, collect, and report their data.

**High School Completion Rate-CPS**

**Definition**

The National Center for Education Statistics (NCES) defines the high school completion rate-CPS as the proportion of young adults ages 18-24 who have not enrolled in high school and have earned a high school diploma or GED. NCES calculates it using data from the Current Population Survey (CPS).\textsuperscript{24}

Some assume that the high school completion rate is the inverse of the status dropout rate. The two rates measure different populations, however: the status dropout rate includes young adults ages 16-24, while the high school completion rate includes young adults ages 18-24. Thus, they are not simple inverses of each other.\textsuperscript{25}
**Major Advantage**

- Provides a cumulative view of the number of young adults nationally, by region, or by state who have earned a high school credential.

**Major Disadvantage**

- Cannot assess school’s accountability because it counts young adults who did not necessarily complete high school where they live now as high school completers. Therefore, it cannot accurately show how well schools are retaining students until they receive a high school diploma or GED.

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**The Longitudinal Cohort Dropout Rate**

**Definition**

The National Center for Education Statistics (NCES) defines the longitudinal cohort dropout rate as the proportion of students in a grade-level cohort, followed over time, who leave school without earning a high school credential. Following a cohort over time not only determines enrollment and completion status of a cohort, but also provides contextual data on the prior in-school experiences of dropouts and their reasons for leaving school. The NCES has used this method in its Longitudinal Studies Program, such as in the National Education Longitudinal Study (NELS: 88). This study surveyed a representative cohort of eighth graders in 1988, and resurveyed them every two years thereafter, as they progressed through high school and beyond.

**Major Advantage**

- Provides background and contextual information on the students who drop out, which helps school officials determine why students drop out.

**Major Disadvantage**
Requires a sophisticated and labor-intensive tracking system that is too expensive for most states to afford.\textsuperscript{30}

**Additional Disadvantages of Current Population Survey (CPS) Data**

The three rates mentioned above that use CPS data (status dropout rate-CPS, event (annual) dropout rate-CPS, and high school completion rate-CPS) have additional, common disadvantages:\textsuperscript{31}

- CPS data do not distinguish between public and non-public school completers and dropouts.
- CPS data are subject to sampling and non-sampling error (non-responses and under-coverage).
- CPS data provide national and regional estimates of dropout and completion rates, but for individual states (or smaller units), sample sizes are too small to reliably report.
- CPS data may provide distorted rates due to out of state students counted as dropouts or completers of schools they never attended.
- CPS data do not provide background and/or contextual data.

**Summary**

Researchers and educators use a variety of measures to calculate dropout rates depending on their purpose. Different measures rely on different definitions and data sources, and therefore, produce different outcomes. Failing to understand the differing assumptions behind each statistic can lead researchers, educators, or policymakers to misinterpret data. Despite the inherent limitations in accurately assessing national dropout rates, researchers and policy makers rely heavily upon the National Center for
Education Statistics’ (NCES) methods because of their ability to reveal broad statistical information and trends about high school dropout and completion rates.\textsuperscript{32}

\section*{Dropout Rates: Arizona’s Measures}

According to the National Center for Education Statistics (NCES) for the 1998-1999 school year, the national event (annual) dropout rate-CPS was 5.0 percent.\textsuperscript{33} For the same time period, Arizona had an event (annual) dropout rate-CPS of 8.4 percent, ranking it second highest of the 37 participating states. State dropout rates ranged from a low of 2.4 percent in North Dakota to a high of 10.0 percent in Louisiana.\textsuperscript{34} The average national high school completion rate-CPS was 85.7 percent, with state averages ranging from 73.5 percent in Arizona to 94.5 percent in Maine.\textsuperscript{35} This ranked Arizona last in high school completion rates.\textsuperscript{36}

Whether Arizona’s dropout rate is high enough to be a subject of concern to policymakers has become a matter of dispute. In a 2001 article, the Arizona School Boards Association suggested the problem was overstated, asserting that there was “tremendous hue and cry over dropout rates, when these lamentations have so little foundation in the [NCES] data.”\textsuperscript{37} A 2002 study by the Arizona Minority Education Policy Analysis Center (AMEPAC) drew a conflicting conclusion. AMEPAC argued that, over the course of a six-year period from 1994-1995 to 1999-2000, almost 200,000 children dropped out of Arizona’s schools – “a loss that amounts to more than the entire population of any single rural county in Arizona.”\textsuperscript{38} These contradictory positions are
rooted in differences over how to interpret the state’s dropout numbers. Such differences may lead to confusion for policymakers, educators, and the public as to the depth and breadth of Arizona’s dropout problem.

In 2002, Arizona, like many other states, implemented a system of performance measures to hold schools and school districts accountable. Among those measures, the Arizona Department of Education (ADE) uses an annual dropout rate as an indicator of a school’s success in maintaining its student population. It uses a longitudinal cohort graduation rate to gauge a school’s success in educating its students.39

_Arizona’s Dropout Rate Report_

Since the 1994-95 school year, the Arizona Department of has compiled and published the state’s annual Dropout Rate Study for grades seven to twelve.40 The Dropout Rate Study provides annual dropout rates on public school districts, individual public schools, and public charter schools. It disaggregates data by county, grade level, racial/ethnic group, and gender, among other categories. The state uses actual enrollment and dropout data reported by individual schools. The study also includes figures for “status unknown” – students who were once but no longer enrolled and for whom there is no evidence that they have re-enrolled or been granted a high school credential.41
**Arizona Department of Education’s (ADE) Annual Dropout Rate**

**Definition**

The ADE defines its annual dropout rate as the proportion of young adults who leave school each year and did not transfer, graduate, or die.\(^{42}\) The state’s dropout count includes a category of “summer dropouts” – students who were enrolled at the end of the prior school year, but who failed to enroll at the beginning of the following school year, and did not transfer, graduate, or die during the summer.\(^{43}\) To establish the number of dropouts, the ADE compares the enrollment count at the end of an academic year with the total number of students enrolled at the end of the previous school year, plus the number of students who enrolled at any point during the academic year in question.\(^{44}\)

The formula for the calculation is as follows:

\[
\frac{\text{Summer 2000 dropouts} + \text{School Year 2000-2001 Dropouts}}{\text{Students Enrolled at the end of 1999-2000} + \text{Students Enrolled at any point during School Year 2000-2001}}
\]

The ADE requires all Arizona public school districts and charter schools teaching students in grades seven through twelve to monitor and report annually their enrollment from the end of the prior school year to the last day of the reported school year.\(^{45}\) The annual dropout rate used by the ADE is in some ways similar to the National Center of Education Statistics (NCES) event (annual) dropout rate-CCD. For example, each calculates the proportion of young adults who leave school each year and do not transfer, graduate, or die, producing a “snapshot” of student dropout activity within one school year. Both report dropout data by race/ethnicity, gender, and region of residence. Although very similar, ADE’s annual dropout rate and the NCES event (annual) dropout rate-CCD are not identical. ADE reports that the data collected from Arizona’s public
schools do not match federal dropout data definitions and guidelines used by the NCES.\textsuperscript{46} Explanations of those differences follow shortly.

\textit{Advantages}

\begin{itemize}
  \item Analyzes dropout data at the county, district, school, and grade level.
  \item Analyzes dropout data by race/ethnicity and gender.
  \item Shows how well schools are preventing students from dropping out each year. Therefore, it can be useful in observing trends in dropout prevention.
\end{itemize}

\textit{Disadvantages}

\begin{itemize}
  \item Uses a July 1-June 30 reporting period as opposed to the National Center for Education Statistics (NCES) reporting period of Oct. 1-Sept. 30. Thus, Arizona’s dropout statistics are not directly comparable to federal dropout statistics or with data from the 26 states that follow NCES methods.\textsuperscript{47}
  \item Data used by ADE to calculate annual dropout rates may not match school district dropout data. Under Arizona law, school districts have up to five years to make necessary revisions to their enrollment data, resulting in potential disparities between data sets.\textsuperscript{48}
  \item Employs different definitions from those used by NCES and other states (ie., “summer dropout” and “GED”) to determine dropout rates. Therefore, it cannot offer accurate comparison with NCES’s or other states’ rates.\textsuperscript{49}
\end{itemize}

\textbf{Results of Arizona’s 2001-2002 Annual Dropout Rate Study}

Arizona’s total statewide public school student enrollment for 2001-2002 was 463,864 students in grades seven through twelve, including students assigned to high school classes without a specific grade designation.\textsuperscript{50} Of those students, 33,027 dropped
out of school by the end of the academic year, resulting in a statewide dropout rate of 7.1 percent. This rate reflects a continued decline for the past four years. The Arizona Department of Education (ADE) disaggregates dropout rates for selected demographic categories (race/ethnicity and gender) and other categories (withdrawal type, status unknown, county, district, school, and grade). Following are dropout rate results by race/ethnicity, gender, and status unknown from ADE’s Dropout Rate Study: 2001-2002 Annual Dropout Rates.

**Race/Ethnicity**

The 2001-2002 dropout rates for each racial/ethnic category for Arizona students in grades seven through twelve are displayed in Table 2.

**Table 2: 2001-2002 Enrollment Count and Dropout Rates by Race and Ethnicity**

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Enrollment Count</th>
<th>Dropouts</th>
<th>Annual Dropout Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, non-Latino</td>
<td>247,738</td>
<td>12,048</td>
<td>4.9%</td>
</tr>
<tr>
<td>Latino</td>
<td>149,599</td>
<td>14,537</td>
<td>9.7%</td>
</tr>
<tr>
<td>Native American</td>
<td>33,729</td>
<td>4,139</td>
<td>12.3%</td>
</tr>
<tr>
<td>African American</td>
<td>22,934</td>
<td>2,014</td>
<td>8.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>9,864</td>
<td>289</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Source: Arizona DOE, Research & Policy Division, September 2002.

Latino, Native American, and African American students continue to leave school at higher rates than White and Asian students. However, the dropout rate for Latino and African American students decreased between 2000 and 2002. While recognizing this improvement, the Arizona Minority Education Policy Analysis Center (AMEPAC) and others assert that a significant disparity still remains in dropout rates between racial and ethnic groups, as evidenced in both state and national reports. For instance, Arizona’s 2001-2002 dropout rates for Native American, Latino,
and African American students are close to double the dropout rate for White students (see Table 2).\(^{55}\)

**Gender**

The annual dropout rate in 2001-2002 for male students in Arizona, grades seven to twelve, was 7.8 percent; the corresponding rate for females was 6.4 percent.\(^{56}\) The disparity between males and females increases in grades nine to twelve (see Table 3). These differences are consistent with national dropout studies in which the male dropout rate is usually higher than the female rate.\(^{57}\)

### Table 3: 2001-2002 Dropout Rates by Gender and Grade

<table>
<thead>
<tr>
<th>Statewide Grades 7-12</th>
<th>Male Dropout Rate: 7.8%</th>
<th>Female Dropout Rate: 6.4%</th>
<th>Gender Difference: 1.4 percentage points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 7-8</td>
<td>Female Dropout Rate: 2.7%</td>
<td>Female Dropout Rate: 3.0%</td>
<td>Gender Difference: 0.3 percentage points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grades 9-12</td>
<td>Male Dropout Rate: 10.4%</td>
<td>Female Dropout Rate: 8.5%</td>
<td>Gender Difference: 1.9 percentage points</td>
</tr>
</tbody>
</table>

Source: Arizona DOE, Research & Policy Division, September 2002.

**Status Unknown**

The Arizona Department of Education (ADE) distinguishes its dropout totals between “officially reported” dropouts – students who have been officially verified as having withdrawn from school without completing requirements for a high school diploma – and those identified as “status unknown” – students who were previously enrolled, but who are no longer enrolled after accruing 10 consecutive days of unexcused
absences and for whom there is no verified evidence of re-enrollment in a school granting a high school diploma.\textsuperscript{58} According to the ADE, status unknown students “are a subset of the dropout population: each student whose status is unknown is considered a dropout, while not all dropouts are coded as status unknown.”\textsuperscript{59}

A large portion of Arizona’s dropouts is coded status unknown. In 2001-2002, an estimated 4,652 of 164,134 seventh and eighth grade students dropped out (2.8\%). Of those who dropped out, nearly 86 percent were coded as status unknown. An estimated 28,375 of 299,730 ninth- to twelfth-graders dropped out (9.5\%). Of those high school students who dropped out, more than 63 percent were coded status unknown (see Table 4).\textsuperscript{60}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|}
\hline
Grade & Enrollment & Number of Dropouts & Dropout Rate & Status Unknown Rate & Rate of dropouts who are Status Unknown \hline
7-8 & 164,134 & 4,652 & 2.8\% & 2.4\% & 85.7\% \hline
9-12 & 299,730 & 28,375 & 9.5\% & 6.0\% & 63.1\% \hline
\hline
\end{tabular}
\caption{2001-2002 Annual Dropout Count and Status Unknown}
\end{table}

Source: Arizona DOE, Research & Policy Division, September 2002.

\textbf{Arizona’s Graduation Rate Report}

Since 1991, the Arizona Department of Education (ADE) has published seven graduation rate reports.\textsuperscript{61} In 2002, ADE, for the first time, included a fifth year graduate category in its graduation rate study, \textit{Graduation Rate Study: Four and Five Year Graduation Rates for the Cohort Class of 2001}. ADE added the fifth year category to take into account students who needed an additional year to pass statewide Arizona’s Instrument to Measure Standards (AIMS) test.\textsuperscript{62}
A cohort class is a graduating class identified by the year in which the cohort would normally graduate. Thus, the freshman class in 1997 is the (grade-level cohort) class of 2001. In its 2002 graduation rate report, ADE also counted those students who stayed for a fifth year as members of the cohort class of 2001.63

Arizona Department of Education’s (ADE) Graduation Rate

Definition

The ADE defines its graduation rate as the proportion of students belonging to a grade-level cohort who earn a high school credential.64 The rate is based on a longitudinal method, which provides student enrollment and transfer activity information about a grade-level cohort (i.e. all 9th graders in the state), tracked over a five year period, as it progresses through high school.65

The ADE places each student in a grade-level cohort into one of the following categories after the fourth year of high school:66

graduated in four years

dropped out

was status unknown

remained enrolled for a fifth year of high school

acquired a GED

After the fifth year, the ADE places all of the grade-level cohort students into one of the following categories (cohort class of 2001 definitions).67

Four-year graduation rate: percentage of the class members who received a high school diploma by the cohort’s fourth year at spring commencement in 2001.
Still enrolled after fourth year rate: percentage of the cohort class of 2001 who did not receive a high school diploma by the cohort’s fourth year at spring commencement in 2001.

Five-year graduation rate: percentage of the class members who received a high school diploma by the cohort’s fifth year at spring commencement in 2002: the figure includes four-year graduates as well as fifth year graduates.

Four-year dropout rate: percentage of the cohort class of 2001 who left within the first four years of high school and did not return, graduate, transfer, receive a GED, or die.

Status unknown rate: percentage of the cohort class of 2001 who left within the first four years of high school; did not return, graduate, transfer, receive a GED, or die; and whose academic status and location were unknown to the schools from which the students left.

GED rate: percentage of the cohort class of 2001 who did not receive a high school diploma, but earned a GED by spring commencement of 2002 (the cohort’s fifth year).

Advantages

▪ Analyzes graduation and dropout data at the county-, district-, school-, and grade-level.

▪ Analyzes graduation and dropout data by race/ethnicity and gender.

Disadvantages

▪ Requires a labor-intensive tracking system that is expensive and difficult to implement.

▪ Does not collect contextual information about why students drop out.

Results of Arizona’s Graduation Rate Study: Cohort Class of 2001

Of the 60,367 students in the grade-level cohort class of 2001, 70.8 percent graduated in four years, 11.2 percent dropped out, and 7.2 percent were status unknown
(see table 5). By the fifth year, 72.9 percent had graduated. The Arizona Department of Education (ADE) data indicate that there is a wide gap in the graduation rates between different racial and ethnic groups, with Latino students having the lowest graduation rate and Asian students the highest. Latinos also had the highest dropout rate, Native Americans the highest status unknown rate, and White students the highest GED rate.

Table 5: Statewide Dropout, Status Unknown, GED, Still Enrolled, and Graduation Rates by Race/Ethnicity for the Cohort Class of 2001

<table>
<thead>
<tr>
<th>Class Membership</th>
<th>Four Year Rates</th>
<th>Five Year Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dropout</td>
<td>Status</td>
</tr>
<tr>
<td>White</td>
<td>34,025</td>
<td>7.3%</td>
</tr>
<tr>
<td>Latino</td>
<td>18,089</td>
<td>17.7%</td>
</tr>
<tr>
<td>Native American</td>
<td>4,243</td>
<td>14.8%</td>
</tr>
<tr>
<td>African American</td>
<td>2,652</td>
<td>13.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>1,358</td>
<td>5.2%</td>
</tr>
<tr>
<td>Total</td>
<td>60,367</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

Source: AZ DOE, Research & Policy Division, September 2002.

**Factors Complicating the Calculation and Interpretation of Arizona’s Dropout and Graduation Rates**

**Technical Factors**

**Keeping Track of Students**

The validity of a graduation rate study depends on the ability of schools to track cohort members consistently. The Arizona Department of Education (ADE) says schools are improving their record keeping and anticipates further improvement driven by the state’s emphasis on school accountability and stronger reporting requirements.
Some believe that because the ADE’s graduation rates rely on voluntarily submitted data – which not all schools report – statewide summaries are incomplete and may underestimate dropout numbers.\textsuperscript{74} Arizona Minority Education Policy Analysis Center (AMEPAC) argues that Arizona schools need a stronger system of following students through their high school careers to verify when they have transferred elsewhere or dropped out.\textsuperscript{75} Finally, there is evidence that school officials lack the resources or skills to track individual students and categorize them correctly, with districts varying widely in how they collect dropout information, consequently producing questionable data.\textsuperscript{76} For example, an ADE official stated that many students whom schools have classified as status unknown or as dropouts may have transferred to another educational facility, artificially inflating the grade-level cohort dropout rate.\textsuperscript{77}

Schools generally, and Arizona schools in particular, seem to have great difficulty following students throughout their school careers. To better keep track of students, the ADE is implementing the Student Accountability Information System (SAIS), a statewide, computerized information system, to allow administrators to follow students more efficiently and accurately.\textsuperscript{78} ADE asserts that once SAIS is fully in place, expected in 2005 or later, schools and districts will collect graduation and enrollment data uniformly.\textsuperscript{79} Because the ADE uses SAIS primarily to collect data for fiscal purposes, rather than to collect data on dropouts, additional resources may be required to modify the database so that it is capable of providing the information necessary to track dropouts.\textsuperscript{80}
Inconsistencies in Reporting Practices

The Arizona Department of Education’s (ADE) 2001 Graduation Rate Study illustrates apparent inconsistencies in reporting practices among districts. The 2001 graduation rate data showed that three large school districts in Arizona – Phoenix Union High School District, Mesa Unified District, and Tucson Unified District – varied widely in their handling of the “status unknown” category. For example, the Phoenix Union High School District reported a dropout rate of 40.6 percent and a zero “status unknown” rate. Mesa Unified District reported only a 3.6 percent dropout rate and a “status unknown” rate of 11.2 percent. Tucson Unified District reported a dropout rate of 3.8 percent and a status unknown rate of 12.7 percent (see Table 6).82

<table>
<thead>
<tr>
<th></th>
<th>Phoenix</th>
<th>Mesa</th>
<th>Tucson</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th yr. Graduation Rate</td>
<td>58.4%</td>
<td>80.8%</td>
<td>73.3%</td>
</tr>
<tr>
<td>4th yr. Graduation Rate</td>
<td>55.0%</td>
<td>79.8%</td>
<td>71.2%</td>
</tr>
<tr>
<td>4th yr. Still Enrolled Rate</td>
<td>4.4%</td>
<td>5.3%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Status Unknown Rate</td>
<td>0.0%</td>
<td>11.2%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Dropout Rate</td>
<td>40.6%</td>
<td>3.6%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Membership</td>
<td>5,273</td>
<td>4,901</td>
<td>4,305</td>
</tr>
</tbody>
</table>

Source: Arizona DOE, Research & Policy Division, September 2002.

Monitoring System

The Arizona Department of Education (ADE) has no monitoring system to verify dropout information provided by individual public schools. This lack of monitoring is significant because the ADE uses dropout statistics for school accountability ratings. Strong pressure to reduce their dropout rates may cause school administrators to skew data. In addition, schools often lack resources or skills to keep track of individual
students adequately. Consequently, it is difficult to ensure the reliability of dropout data.

**Addition of New Categories**

The Arizona Department of Education (ADE) added the “status unknown” category in 2001 after learning that a number of students assumed to be dropouts enrolled in other school districts. The introduction of this new category seemed to reduce dropout rates. For example, the ADE’s 2000 Graduation Rate Study listed a dropout rate of 21.8 percent for the cohort class of 2000. In the 2001 edition, the dropout rate for the 2001 grade-level cohort class fell by nearly half to 11.2 percent, while the status unknown rate, in its first year, was recorded as 9.8 percent. The two figures (11.2% and 9.8%) totaled 21 percent – about the same as the previous year’s dropout rate when the status unknown category was not available (see Table 7).

<table>
<thead>
<tr>
<th></th>
<th>Class Size</th>
<th>Still Enrolled After 4 years</th>
<th>4 year Dropout Rate</th>
<th>Status Unknown Rate</th>
<th>4 year Graduation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>43,875</td>
<td>6.9%</td>
<td>21.5%</td>
<td>N/A</td>
<td>68.0%</td>
</tr>
<tr>
<td>1994</td>
<td>43,057</td>
<td>6.4%</td>
<td>24.3%</td>
<td>N/A</td>
<td>69.3%</td>
</tr>
<tr>
<td>2000</td>
<td>57,585</td>
<td>6.9%</td>
<td>21.8%</td>
<td>N/A</td>
<td>71.0%</td>
</tr>
<tr>
<td>2001</td>
<td>60,367</td>
<td>7.7%</td>
<td>11.2%</td>
<td>9.8%</td>
<td>70.8%</td>
</tr>
</tbody>
</table>


Additionally, the ADE inconsistently uses the status unknown category. As noted earlier, the ADE’s annual dropout study considers students classified as status unknown as a part of the dropout population. The Graduation Rate Study for the Cohort Class of
2001 did not. That study – the first graduation rate study to consider status unknown students – coded them in a separate category; they were not part of the dropout rate.

Between 1993-2001, Arizona’s statewide graduation rate has not shown significant improvement. While year-to-year data are not available, the ADE’s 1993 Graduation Rate Study reported an overall graduation rate of 68.0 percent, while the 2001 study reported an overall graduation rate of 72.9 percent, about five percentage points higher (see Table 5 and 7 above).

From 1993-2001, the same trends in graduation and dropout rates are apparent in each racial/ethnic category: graduation rates increased a little; and until the introduction of the status unknown category in 2001, dropout rates stayed about the same from 1993-2000. Therefore, because of the addition of new categories, dropout rates have appeared to decrease by about half (see Appendix A).

**Data Integrity**

As the Arizona Department of Education (ADE) annual dropout rate, the ADE graduation rate is typically more accurate than a sample survey because the numbers are verifiable – actual enrollment and graduation counts are used – and therefore, the data seem more difficult to manipulate.

Despite such apparent safeguards, some researchers question the validity of the method’s self-reported graduation rates, particularly under accountability systems that emphasize high stakes. Under pressure to raise test scores and keep students in school, schools may be tempted to underreport their dropout numbers or to shuttle students off to alternative-diploma programs so that they do not count in dropout calculations.
Inclusion of Charter and Alternative Schools

Charter and alternative schools seem to have higher dropout rates. This may not be entirely surprising in that alternative programs may be drawing more students already at risk for dropping out because they were not succeeding in traditional high schools. Charter schools in the 2000-2001 school year reported a median graduation rate of 42.7 percent, compared with 75.6 percent for non-charter schools. Charter schools also appeared to have even more difficulty keeping track of students who left: they reported a median “status unknown” rate of 32.3 percent, compared with 4.1 percent for non-charter schools.

In the words of the Center for Public Policy Priorities, an independent research institute, “All of these recovery efforts and definitions changes serve to lower the apparent numbers of dropouts, but don’t do anything to decrease the actual numbers of students who leave school.” The data from Arizona’s schools suggest that changing definitions and methods of calculating dropout and graduation rates and placing students into alternative programs or schools may have decreased the overall reported dropout rate, but did little to increase the number of students who graduate.

Interpretation of Dropout Rates

Simply reporting an annual dropout rate, as opposed to reporting cumulative dropout data, does not always convey the extent of the dropout problem. The Arizona Minority Education Policy Analysis Center (AMEPAC), in 2002, examined dropout rates reported by the ADE over six years (1994-95 to 1999-2000). The Arizona Department of Education (ADE) reported an annual average dropout rate of 8.8 percent for all
students in grades seven to twelve, a loss of 32,000 students a year, or 192,000 students over the course of the study. In the words of Greene, using annual dropout rates instead of paying attention to cumulative dropout data “is like calculating a credit card interest rate as a monthly percentage instead of an annual percentage: the rate feels low but in truth it compounds over a longer period of time.” 101

Demographic Characteristics

In Arizona, several demographic factors complicate the calculation and analysis of dropout and graduation rates. During the 1990s, Arizona's Latino population increased by 88 percent and now constitutes 25 percent of Arizona's total population. 102 A substantial percentage of the Latino population increase is probably from foreign immigration. Some researchers have argued that the large immigrant population artificially inflates the state's Latino status dropout rate, 103 thus creating a misleading impression of the performance of Arizona's education system and Latino performance within it. Those researchers argue that dropout and graduation rates are biased because at least half of all Latino immigrant laborers ages 16 to 24 who did not complete high school in their country of origin and have never enrolled in U.S. schools are included in status dropout counts. 104 Since they did not attend public schools in Arizona, including them in status dropout calculations unfairly maligns Arizona's public schools. Even so, inaccuracies due to the high number of Latino immigrants cannot fully account for Arizona's high dropout and low completion rates. 105
Between 1990 and 2000, Arizona’s K-12 public school enrollment increased by 24 percent and the demographic makeup of its students drastically changed. During this period, the numbers of Latino students increased by 57 percent (see Table 8). As this broad demographic trend will probably continue, Latino students – many of them either recent immigrants or the children of immigrant parents – will constitute an increasingly larger portion of the total K-12 population in the coming decade.

Table 8: K-12 Public School Statewide Enrollment Growth by Race/ Ethnicity 1990-1991 and 1999-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total State Enrollment</th>
<th>White</th>
<th>Latino</th>
<th>Native American</th>
<th>African American</th>
<th>Asian</th>
<th>Total Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1991</td>
<td>683,041</td>
<td>423,666</td>
<td>174,112</td>
<td>46,381</td>
<td>28,574</td>
<td>10,308</td>
<td>259,375 (38.0%)</td>
</tr>
<tr>
<td>1999-2000</td>
<td>847,762</td>
<td>466,597</td>
<td>268,098</td>
<td>58,475</td>
<td>38,421</td>
<td>16,171</td>
<td>381,165 (45.0%)</td>
</tr>
<tr>
<td>Net Gain</td>
<td>164,721</td>
<td>42,931</td>
<td>93,986</td>
<td>12,094</td>
<td>9,847</td>
<td>5,863</td>
<td>121,790</td>
</tr>
<tr>
<td>% of Total Growth</td>
<td>100.0%</td>
<td>26.0%</td>
<td>57.0%</td>
<td>7.0%</td>
<td>6.0%</td>
<td>4.0%</td>
<td>74.0%</td>
</tr>
</tbody>
</table>

Source: Arizona DOE, Research and Policy Division, August 2001.

An understanding of demographic trends is important in interpreting Arizona's dropout and graduation rates. Research shows that first and second generation U.S. born Latinos are more likely to drop out than their counterparts of other races or ethnicities with only 64 percent of Arizona’s Latino students graduating from high school. Thus, Arizona's large and growing Latino population combined with the group’s high dropout and low high school completion rates strongly support the conclusion that Arizona has a serious dropout problem that will worsen over time.
Report Recommendations

Arizona’s current methods of collecting data, calculating rates, and reporting these results have flaws that may inaccurately characterize the nature and extent of the state’s dropout problem. This section describes two approaches to improve the accuracy, reliability, and utility of Arizona’s dropout and school completion data.

The first approach is to make improvements in the current methods used to calculate Arizona’s dropout rate and graduation rate. The second approach is to adopt a new method: a longitudinal individual student cohort analysis (LISCA) study, augmented with student data from the Student Accountability Information System (SAIS).

Improvements to the Current System

Problem

The Arizona Department of Education (ADE) uses a July 1-June 30 reporting period as opposed to the National Center for Education Statistics (NCES) reporting period of Oct. 1-Sept. 30. Thus, Arizona’s dropout statistics are not directly comparable to federal dropout statistics or with data from the 26 states that follow NCES methods.109

Recommendation

Change ADE’s reporting period to match the one used by NCES. Aligning ADE’s reporting period with the federal one will result in data that is more comparable with other states and federal Common Core of Data (CCD) analyses, and be more statistically reliable.
Problem

Dropout and completion data at the school- and district-level may not match the corresponding data at ADE. Under Arizona law, school districts have up to five years to review and, if necessary, correct their enrollment data. This lengthy review period can cause inaccurate data comparisons.\textsuperscript{110}

Recommendation

Reduce the allowable time for data review and correction from five years to a maximum of one year. The shorter time will help minimize the problem of inaccurate data.

Problem

Inconsistent definitions cause difficulties comparing state- and federal-data.\textsuperscript{111}

Recommendation

Aligning ADE’s definitions with the federal ones will minimize the difficulties in comparing state- and federal-data.

Problem

Wide inconsistencies exist in reporting practices among schools and school districts. For example, the 2001 Graduation Rate Study found large variations in how districts handled the status unknown category. One district reported a dropout rate of 40.6 percent and a status unknown rate of zero, while another reported a dropout rate of
3.8 percent and a status unknown rate of 12.7 percent. Three recommendations address this problem.

**Recommendations**

- ADE should offer training to school- and district-level personnel on the use of withdrawal codes. Standardization training will encourage a more consistent classification of students who withdraw.

- ADE should conduct random or selective enrollment audits of schools’ student enrollment records. Such audits would encourage a more general accuracy of the record keeping and reporting process. The state should conduct audits randomly, or selectively at schools reporting “unusual” numbers.

- ADE should assign to each school district a coordinator whose primary responsibility is supporting and monitoring dropout data collection.

**Change the way Arizona Calculates Dropout and Graduation Rates**

**Recommendation**

Conduct a longitudinal individual student cohort analysis (LISCA) study. This approach will follow a representative sample of students from a grade-level cohort baseline. This is different from the past longitudinal grade-level cohort studies, which attempted to follow every student in a grade-level cohort class. Using sampling methods will cost less and greatly simplify the collection of individual student data over the length of the study.

Following an approach similar to the National Education Longitudinal Study of 1988 (NELS: 88), this study will survey students at least five consecutive years, beginning with their entry into ninth grade. Unlike NELS: 88, which surveyed students every two years, the LISCA study will survey students every year. LISCA study
administrators will have students fill out questionnaires to obtain data on enrollment and graduation status. The questionnaires will cover a range of topics such as school, work, and home experiences; educational resources and support; parental and peer educational attainment; and neighborhood characteristics. This information will provide policymakers with descriptive and relative data about educational outcomes, offering insights into what motivates students to drop out of high school or to continue to graduation. Additional questions could collect data on smoking, alcohol and drug use, and extra-curricular activities.

The second component of this approach is to review of the Student Accountability Information System (SAIS) to determine the necessary modifications to utilize SAIS to collect dropout data. Although ADE created the system to support Arizona’s school finance system,\textsuperscript{113} it appears that SAIS offers a good dropout and completion data source. ADE designed SAIS to collect enrollment data on each student such as enrollment code, enrollment date, membership type, normal graduation year, withdrawal code, summer withdrawal code, withdrawal reason code, withdrawal date, and year-end status.\textsuperscript{114} If ADE can modify the system to produce data files and reports pertinent to dropout and completion rates, it would greatly contribute to the survey data collected from the cohort sample.

\textit{Limitation of the Longitudinal Individual Student Cohort Analysis (LISCA) Study}

The use of a representative sample in LISCA does have a limitation: it is difficult to obtain a truly random sample. Simple random samples usually under-represent small subgroups.\textsuperscript{115} Over-sampling of these subgroups will be necessary to ensure that there
are enough respondents in each subgroup (i.e. Asian females). This factor will increase the cost, but it is still cheaper than surveying all students.

Notwithstanding this limitation, a true longitudinal study offers important advantages. The state can obtain not only independent dropout and graduation numbers, but also discover what actually happens to the students now classified in other categories. This method allows analysts to examine the causes of dropping out, evaluate various theories, and assess the effectiveness of dropout interventions.

**Conclusion**

Arizona should replace its current methods of calculating dropout and graduation rates with a longitudinal individual student cohort analysis (LISCA) study, augmented with student data from the Student Accountability Information System (SAIS). SAIS data will help answer the question “How large is Arizona's dropout problem?” LISCA data will help answer the question “Why are Arizona students dropping out?” Thus, information from the LISCA study and the SAIS system complement each other, providing a more complete understanding of Arizona's dropout problem.

Given the technical requirements and the political sensitivity of collecting dropout data, an independent entity should perform the LISCA study. However, it will be necessary for this entity to work collaboratively with the Arizona Department of Education (ADE) in order to link student data from SAIS with the data collection and student tracking design of LISCA. The two data sets need to have common links because ADE will collect SAIS data and an independent entity will collect LISCA data.
Data from a longitudinal survey will help policymakers and practitioners develop educational reform programs that more specifically address the needs of students at risk of dropping out. Doing so will help reduce dropout rates and increase graduation rates, raising the skills of the work force and therefore lifting incomes and generating more tax revenues rather than draining the state’s budget. Currently, there are no dedicated funding sources for such a project; therefore, Arizona must allocate funds to implement this recommendation. Investing in better measurements of dropout and graduation rates is the first step to improving those rates, lowering the cost that high dropout and low graduation rates impose on society and individuals.
References


The 1993 graduation rate is for four years, as are the rates for 1994 and 2000, while the 2001 rate is for five years. The 2001 five year graduation rate is in Table 5 on page 21. The 1993 four year graduation rate is in Table 7 on page 24.


APPENDIX A


Class of 1993 Graduation Rate Study by Race & Ethnicity

<table>
<thead>
<tr>
<th>Class Membership</th>
<th>Four Year Dropout Rate</th>
<th>Still Enrolled</th>
<th>Graduation Rate</th>
<th>Number Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>26,785</td>
<td>20.60%</td>
<td>5.20%</td>
<td>74.20%</td>
</tr>
<tr>
<td>Latino</td>
<td>11,388</td>
<td>34.40%</td>
<td>9.90%</td>
<td>55.60%</td>
</tr>
<tr>
<td>Native American</td>
<td>3,064</td>
<td>29.50%</td>
<td>9.10%</td>
<td>61.50%</td>
</tr>
<tr>
<td>African American</td>
<td>1,775</td>
<td>32.20%</td>
<td>8.30%</td>
<td>59.50%</td>
</tr>
<tr>
<td>Asian</td>
<td>863</td>
<td>14.30%</td>
<td>7.40%</td>
<td>78.30%</td>
</tr>
<tr>
<td>Total</td>
<td>43,875</td>
<td>21.50%</td>
<td>6.90%</td>
<td>68.00%</td>
</tr>
</tbody>
</table>

Class of 1994 Graduation Rate Study by Race & Ethnicity

<table>
<thead>
<tr>
<th>Class Membership</th>
<th>Four Year Dropout Rate</th>
<th>Still Enrolled</th>
<th>Graduation Rate</th>
<th>Number Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>26,074</td>
<td>18.90%</td>
<td>4.90%</td>
<td>76.20%</td>
</tr>
<tr>
<td>Latino</td>
<td>11,396</td>
<td>34.40%</td>
<td>8.40%</td>
<td>57.20%</td>
</tr>
<tr>
<td>Native American</td>
<td>3,037</td>
<td>33.60%</td>
<td>11.10%</td>
<td>55.30%</td>
</tr>
<tr>
<td>African American</td>
<td>1,643</td>
<td>30.60%</td>
<td>7.80%</td>
<td>61.70%</td>
</tr>
<tr>
<td>Asian</td>
<td>907</td>
<td>11.80%</td>
<td>7.70%</td>
<td>80.50%</td>
</tr>
<tr>
<td>Total</td>
<td>43,057</td>
<td>24.30%</td>
<td>6.40%</td>
<td>69.30%</td>
</tr>
</tbody>
</table>

Class of 2000 Graduation Rate Study by Race & Ethnicity

<table>
<thead>
<tr>
<th>Class Membership</th>
<th>Four Year Dropout Rate</th>
<th>Still Enrolled</th>
<th>Graduation Rate</th>
<th>Number Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>33,236</td>
<td>15.50%</td>
<td>5.30%</td>
<td>78.90%</td>
</tr>
<tr>
<td>Latino</td>
<td>16,814</td>
<td>32.10%</td>
<td>9.10%</td>
<td>58.60%</td>
</tr>
<tr>
<td>Native American</td>
<td>3,968</td>
<td>32.50%</td>
<td>11.30%</td>
<td>55.90%</td>
</tr>
<tr>
<td>African American</td>
<td>2,367</td>
<td>24.90%</td>
<td>7.00%</td>
<td>67.80%</td>
</tr>
<tr>
<td>Asian</td>
<td>1,200</td>
<td>11.10%</td>
<td>4.80%</td>
<td>84.00%</td>
</tr>
<tr>
<td>Total</td>
<td>57,585</td>
<td>21.80%</td>
<td>6.90%</td>
<td>71.00%</td>
</tr>
</tbody>
</table>

Class of 2001 Graduation Rate Study by Race & Ethnicity

<table>
<thead>
<tr>
<th>Class Membership</th>
<th>Four Year Dropout Rate</th>
<th>Still Enrolled</th>
<th>Graduation Rate</th>
<th>Number Dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>34,025</td>
<td>7.30%</td>
<td>5.20%</td>
<td>80.80%</td>
</tr>
<tr>
<td>Latino</td>
<td>18,089</td>
<td>17.70%</td>
<td>11.40%</td>
<td>60.30%</td>
</tr>
<tr>
<td>Native American</td>
<td>4,243</td>
<td>14.80%</td>
<td>9.90%</td>
<td>64.40%</td>
</tr>
<tr>
<td>African American</td>
<td>2,652</td>
<td>13.30%</td>
<td>11.20%</td>
<td>65.20%</td>
</tr>
<tr>
<td>Asian</td>
<td>1,358</td>
<td>5.20%</td>
<td>4.90%</td>
<td>85.20%</td>
</tr>
<tr>
<td>Total</td>
<td>60,367</td>
<td>11.20%</td>
<td>7.70%</td>
<td>72.90%</td>
</tr>
</tbody>
</table>

### APPENDIX B

#### Dropout, Status Unknown, GED, Still Enrolled, and Graduation Rates of Cohort Class of 2001 for Three Districts

<table>
<thead>
<tr>
<th>District</th>
<th>School</th>
<th>Cohort Membership</th>
<th>Four Year Dropout Rate</th>
<th>Status Unknown Rate</th>
<th>Four Year Grad Rate</th>
<th>Still Enrolled After 4th Year</th>
<th>Five Year Grad Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Union High</td>
<td>Alhambra High School</td>
<td>680</td>
<td>42.8%</td>
<td>0.0%</td>
<td>51.9%</td>
<td>5.3%</td>
<td>55.9%</td>
</tr>
<tr>
<td></td>
<td>Camelback High School</td>
<td>649</td>
<td>48.7%</td>
<td>0.0%</td>
<td>50.8%</td>
<td>0.5%</td>
<td>53.8%</td>
</tr>
<tr>
<td></td>
<td>Carl Hayden High School</td>
<td>636</td>
<td>41.5%</td>
<td>0.0%</td>
<td>52.4%</td>
<td>6.1%</td>
<td>54.9%</td>
</tr>
<tr>
<td></td>
<td>Central High School</td>
<td>666</td>
<td>40.7%</td>
<td>0.0%</td>
<td>53.8%</td>
<td>5.6%</td>
<td>57.7%</td>
</tr>
<tr>
<td></td>
<td>Maryvale High School</td>
<td>520</td>
<td>41.5%</td>
<td>0.0%</td>
<td>56.2%</td>
<td>2.3%</td>
<td>60.6%</td>
</tr>
<tr>
<td></td>
<td>North High School</td>
<td>738</td>
<td>45.8%</td>
<td>0.0%</td>
<td>50.8%</td>
<td>3.4%</td>
<td>54.5%</td>
</tr>
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