An Arizona study examined whether charter schools contribute to the racial/ethnic segregation of students in publicly funded schools. Data included Arizona school enrollment data for 1996, 1998, and 2002; school addresses for 2002 charter schools; and other relevant information specific to charter schools, obtained from the Arizona Department of Education. The school addresses were plotted onto digital maps. This paper presents two analyses. The first tracks enrollment and demographic trends in a sample of 1996 Phoenix and Tempe charter schools and nearby public schools that was examined in an earlier study. Data indicate that racial/ethnic separation is indeed a potential consequence of at least some newly formed charter schools. It appears that charter schools can exacerbate the ethnic separation in already stratified public schools. The second analysis focuses on 2002 enrollment trends of Phoenix and Tempe charter schools. The racial/ethnic compositions of nearly 100 charter schools were compared to those of proximal public schools of the same grade level. Data indicate a new trend in high Hispanic areas of more White students and more African-American students in charter schools than in the surrounding public schools. Four appendices present digital maps of school locations in Phoenix and Tempe.
Arizona Charter Schools: Resegregating Public Education?

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Chicago, Illinois
April 2003
The question whether charter schools contribute to the racial/ethnic segregation of students in publicly funded schools remains contested. Advocacy groups, supported by national evaluations (e.g., Education, 2000), maintain that charter schools are as racially and ethnically diverse as public schools. Several other investigations report evidence to the contrary, e.g., (Cobb & Glass, 2001; Cobb & Glass, 1999; Wells, 1999; Wells, Holme, Lopex, & Cooper, 2000). Such disagreement in the research literature may stem from three different sources. First, the methodological approaches vary considerably, and some are more sensitive to detecting voluntary segregation than others. For instance, aggregating national, state, or even district level enrollment data can mask underlying variation between schools. Second, to the extent that a particular state or states are the focus of analysis, the variability in charter school legislation makes it difficult to generalize to charter schools nationally. In other words, there is probably some truth to both sets of claims--partly because state charter laws can be more or less susceptible to stratifying tendencies. And finally, research on school choice is heavily influenced by ideology. For certain advocates and critics, their biases may lead them to foregone conclusions.

Given the variability in charter school laws, it makes sense to study the potential for segregation at the state level. Examining states with large numbers of charter schools, such as California, Arizona, and Michigan, may be particularly informative. Arizona is now home to over 400 charter schools enrolling some 45,000 students. Of the 39 states with charter schools, Arizona has the highest share (over 5%) of public school students. A previous investigation of over one hundred Arizona charter schools revealed patterns of ethnic segregation (Cobb & Glass, 1999). In that study, the racial/ethnic compositions of 55 urban and 57 small town charter schools were compared to neighboring public schools. Nearly half of the 1996 charter schools exhibited enrollments that were .15 or greater different in proportion white; the overwhelming majority was in the direction of more white. In addition, a pattern among the secondary level charter schools suggested that those with a majority of racial/ethnic minority students tended to espouse a vocational mission--the types of schools that do not typically lead students to college. In contrast, many of the majority white charter high schools were more clearly "college preparatory" academies.

This paper provides an update to the earlier study through two separate analyses. The first represents a longitudinal examination of enrollments from a sample of 1996 urban charter schools and the public schools that surround them. The second analysis focuses on 2002 enrollment trends of Phoenix and Tempe charter schools. The racial/ethnic compositions of nearly one hundred charter and nearby public schools were systematically compared. The other three hundred charter schools remained unexamined in this study primarily due to time limitations. Most of these are located in small towns across the state; some others reside in Arizona's second major urban area (Tucson).
Data Sources and Analysis

The Arizona Department of Education provided October 1 school enrollment data for 1996, 1998, and 2002. School addresses for 2002 charter school were accessed from the Arizona Department of Education web site. The address information from the web page was converted to a database (.dbf) file and later plotted onto digital maps using ArcView GIS® software. The Arizona Department of Education web site also provided access to other relevant information specific to charter (e.g., first year of operation, target populations, change in charter sponsorship, links to proprietary charter school web pages) and traditional public (e.g., grade levels served) schools. In addition, our analysis was supported by quantitative and geographical databases used in previous studies (Cobb & Glass, 2001; Cobb & Glass, 1999).

This report is comprised of two separate analyses. The first investigation tracks enrollment and demographic trends exhibited by a small, select sample of 1996 charter schools that were examined in our earlier study (Cobb & Glass, 1999). The second presents an independent analysis of 2002 Phoenix and Tempe charter schools. The racial/ethnic compositions of nearly one hundred charter schools were compared to those of proximal public schools of the same grade level. Both sets of analyses rely on the use of digital geographic maps.

PART I:
Enrollment trends among a select sample of 1996 urban charter schools in Phoenix and Tempe

During the initial stages of this investigation, it became apparent that we were not going to be able to track each one of the 55 Phoenix-area charter schools examined in our original study. During the past six years several new charter schools emerged, a few folded, moved, or reconstituted themselves, thus making any complete longitudinal analysis virtually impossible. (We address the methodological challenges associated with charter school research later in the report.) Instead, we examined here a small sample of 1996 charter schools from Phoenix (specifically, central, north central, and southeast regions of Phoenix) and Tempe. In actuality, what is (also) being sampled here are neighborhoods and communities. Each of the charter schools in the sample had previously exhibited a tendency to contribute to racial/ethnic separation. We were interested in seeing if such patterns were sustained or changed. The sample does not permit generalizations to all Arizona charter schools. Nonetheless, it offers a description of what has occurred in several urban communities across Phoenix and Tempe.

What follows are a series of descriptive, map-based analyses. Among the nineteen maps from our original analysis (Cobb & Glass, 1999), we provide an update on charter schools—and the communities they presumably represent—for five of them. Ten charter schools were represented in the five original maps, while more than 40 are represented in
the four maps generated for this report. The maps in Figures 1-4 provide several pieces of information. Most importantly, they place schools sharing a common student catchment area in a geographic context. The maps also portray the distance between schools and other important geographic characteristics (e.g., the existence of major highways, rivers, mountains, and airports). The maps also contain descriptive information for each school—namely, the proportion of white students enrolled and total enrollment in 1996, 1998, and 2002, name of school and grade levels served. These data served as the basis for school to school comparisons. Additional information was provided when it was deemed to enrich the context and as space allowed.

**North Central Phoenix Middle and High Schools**

A racially and ethnically diverse student population inhabits this 32-square-mile area in north central Phoenix (Figure 1, Appendix). The one exception is the neighborhood to the far northeast of the map (an area from which the Madison School draws some of its students). Over the past six years, the public middle and high schools in this region have become more racial/ethnic minority. Illustrative of this trend is the Osborn Middle School, which dropped from 38% white to 21% white between 1996 and 2002. Similar trends can be seen in the remaining public schools.

The triangular shapes in Figure 1 represent charter schools. The “outlined” triangles denote charter schools that moved into the area some time after 1996. The only charter school in the region in 1996 was *ABC Alternative Learning Center* (the site presently operated as *Dove Academy College Preparatory*). In 1996, *ABC Alternative Learning Center* was substantially more white than its traditional public school counterparts. In 1998 its proportion white declined modestly (see Figure 1). By 2002, the charter school had been re-named as *Dove Academy College Prep*. Unfortunately, 2002 enrollment data were unavailable.

Significant to this region has been the influx of eight new charter schools since 1996. Among the charter high schools with enrollment data, there appears to be wide variation in enrollments by race/ethnicity. For instance, nearly adjacent *Career Success High School* (52% Hispanic, 22% African-American) and *AmeriSchools Academy* exhibit a .45 difference in the proportion of white students enrolled in 2002. Likewise, even closer, the *International Commerce Institute* and the *Humanities & Sciences Institute*, although both majority white, are .17 different in proportion white.

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1 As is true in many other states, charter schools in Arizona do not have boundaries of any sort, let alone boundaries coterminous with the school district in which they reside.
2 Similar to the geographic area represented by Figure 6 in Cobb and Glass (1999).
3 To distinguish between charter and traditional public schools within the text, we have italicized the former.
With one exception, in this particular region there is considerably less variation about the public middle and high schools in terms of proportion white (.21, .24, .20, .18, .61 white) compared to the charter middle and high schools (.15, .60, .42, .41, .61, .78, .11 white). This is suggestive of racial/ethnic separation among public school students. Two highly enrolled charter schools serve a predominantly racial/ethnic minority population (Career Success, .15 white, and Phoenix Advantage Academy, .11 white). These proportions are below the proportion minority of the two largest traditional public high schools in the area. The remainder of the charter schools demonstrate a wide range of proportion white—some of which exceed the proportion white of neighboring traditional publics. Using all three large traditional public high schools in the region as a basis for comparison (.18, .24, and .20 proportion white, respectively), five of seven of the charter schools serving grades 9-12 are at least .17 greater in terms of proportion white.

**Central Phoenix High Schools**

Most prominent in Figure 2 is the influx and exodus of charter schools that occurred during the past six years. Nine charter schools recently located in these inner city neighborhoods of Phoenix. The six faded triangles represent charter schools that closed or moved some time between 1997 and 2002. These ranged in proportion white (.23 to .66), and were mostly small schools.

The racial/ethnic compositions of the large traditional public schools (symbolized by solid circles in Figure 2) characterize the racial/ethnic make-up of the communities they serve. Kenilworth Elementary, Capitol Elementary, Whittier Elementary, Ralph Waldo Emerson Elementary, Thomas A. Edison Elementary, Garfield Elementary, and North High School enroll low proportions of white students (.13, .07, .08, .06, .01, .02, .20, respectively) and high proportions of Hispanic students (.76, .88, .82, .86, .91, .95, .64). Four of the charter schools parallel the ethnic enrollments of the traditional publics (see Table 1).

<table>
<thead>
<tr>
<th>Charter school</th>
<th>%W</th>
<th>%H</th>
<th>%AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ Call A Teen Center for Excellence</td>
<td>4</td>
<td>89</td>
<td>6</td>
</tr>
<tr>
<td>Genesis Academy</td>
<td>20</td>
<td>59</td>
<td>12</td>
</tr>
<tr>
<td>New World Education Center</td>
<td>16</td>
<td>69</td>
<td>10</td>
</tr>
<tr>
<td>Tertulia PreCollege</td>
<td>5</td>
<td>90</td>
<td>4</td>
</tr>
<tr>
<td>Traditional public schools range (n=7)</td>
<td>1-20</td>
<td>64-91</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Table 1: Charter schools in Figure 2 that reflect the racial/ethnic composition of nearby publics

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4 Similar to the geographic area represented by Figure 3 in Cobb and Glass (1999).
In contrast, six of the charter schools do not reflect the racial/ethnic composition of the surrounding public schools (Table 2). Five of these are in the direction of more white on the order of a .15 proportion difference. The one exception is Progressive Leadership Academy, which is 93% African-American. Its reported mission is "structured to offer a cutting-edge program of high academic and behavioral standards to average educational achievers and impoverished youth for the purpose of preparing them for successful journeys throughout academic, social, vocational, and life pursuits" (Education, 2003). None of the traditional public schools that encircled Progressive (some of which are located to the north and west and are not shown in Figure 2) served a population that was more than 20% African-American.

<table>
<thead>
<tr>
<th>Charter school</th>
<th>%W</th>
<th>%H</th>
<th>%AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona School for the Arts</td>
<td>80</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Arizona Academy of Science and Tech.</td>
<td>60</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Metropolitan Arts Institute</td>
<td>73</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Khalsa Montessori</td>
<td>68</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Summit Elementary</td>
<td>48</td>
<td>34</td>
<td>14</td>
</tr>
<tr>
<td>Progressive Leadership Academy</td>
<td>1</td>
<td>6</td>
<td>93</td>
</tr>
</tbody>
</table>

Traditional public schools range (n=7) 1-20 64-91 1-9

It may be the case, of course, that these charter schools are locating in these inner city areas due to cost considerations (i.e., low rents), and that they are drawing their students from (presumably more white) communities outside this geographic area. However, even if that were the scenario, this does not explain the low representation among racial/ethnic minority students in the schools that are far more white than the neighborhoods in which they reside.

Finally, of note is the striking contrast in proportion white between two charter schools that share the same physical location at 1313 North 2nd Street. K-12 New World Education Center is .16 white compared to K-6 Summit Elementary, which is .48 white. The racial/ethnic composition of the neighborhoods in central Phoenix are predominantly Hispanic. The traditional public schools, and some charter schools, reflect this constitution. The enrollments of a number of charter schools are distinctly different, however, which is suggestive of increased segregation among public school students.
Southeast Phoenix Schools

In the past few years, several new charter schools have opened in this racially and ethnically diverse area (Figure 3). Bright Ideas Charter School serves elementary and middle school students. It opened in 2000 as a district-sponsored charter. In early May of 2001, its name was changed to Brite (sic) Ideas Charter School. The following fall (9-28-01) the school closed but re-opened several months later (2-13-02) as Bright Ideas Charter School--Van Buren. In 2002, the school enrolled 61 students, over half of whom were African-American. Located very nearby are two traditional public schools serving grades PreK-8. Adjacent to one another, the Balsz School and the David Crockett School are less than half a mile away from the Bright Ideas Charter School. The racial/ethnic compositions of the traditional public schools mirror one another; collectively their student population is roughly 80% Hispanic, 10% African-American, and 5% white). In comparison, Bright Ideas is 16% Hispanic, 54% African-American, and 28% white. Although one must be cautious about drawing conclusions given Bright Ideas' small size, the legitimate question remains why so few Hispanic students are attending Bright Ideas' given the relatively higher proportions living in the surrounding neighborhoods.

Day Star Academy charter school opened its doors in 2001. Until 11-1-01, it was referred to as Phoenix Challenge Academy. Day Star Academy is located adjacent to Papago Elementary, a traditional public school serving grades K-8. Day Star’s charter lists its clientele as students in grades K-12 but currently enrolls students in grades 1-7 (enrollments in the fall of 2002 were 33, 18, 17, 8, 6, 6, and 4 in grades 1-7, respectively). Papago Elementary is a much larger institution enrolling over 1,000 students. About 14% of the Papago students are white compared to Day Star’s 38%. A comparison between racial/ethnic categories shows a similar pattern to that noted above with Bright Ideas. That is, based on 2002 enrollment data, the charter school located very close to the traditional publics of the same grade level enrolled relatively fewer Hispanic students (charter: 40%, public: 74%) and relatively more African-American (charter: 16%, public: 7%) and more white (charter: 38%, public: 14%) students. As above, conclusions should be moderated by school size considerations.

Wilson High School opened as a non-district-sponsored charter school in 1998. It is located between two traditional public schools, Wilson Primary (PK-3) and Wilson Elementary (4-8). Wilson High School has grown in total enrollment from 97 students in its first year to 322 students in 2002. The racial/ethnic population of Wilson High School mirrors that of the two traditional public feeder schools and the nearby community, which is predominantly Hispanic. Just over a mile and a half away is Gateway Community High School. It has been in operation since 1995. The percentage of white students has dropped steadily between 1996 and 2002, going from a majority (70%) to a minority (44%). This

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5 Similar to the geographic area represented by Figure 8 in Cobb and Glass (1999).
6 In Arizona, charters are granted by one of three entities: the State Board of Education, the State Board of Charter Schools, and Public School Districts.
decline is concomitant with a significant drop in enrollment over the past four years (444 to 270 students), and suggests that white families are leaving this area or choosing alternative schooling options. The origin of this rather abrupt change in enrollments is worthy of closer inspection.

The Academy of Excellence charter school (serving K-8) opened in 1998. Its current ethnic enrollments are somewhat similar to the surrounding traditional public schools, although, once again, there is similarity to the patterns evidenced by nearby Bright Ideas and Day Star Academy. That is, the Academy of Excellence enrolls relatively more African-American students than the closest elementary traditional publics (charter: 28%, publics: 5%, 10%, 7%) and relatively fewer Hispanic students (charter: 52%, publics: 88%, 80%, 74%).

The Phoenix School of Academic Excellence (serving grades 7-12) opened in 1998 with 20 students, all white. By 2002, its enrollment had reached 40 students, 45% of who were white. The nearest traditional public high school to the north is Arcadia, which is 80% white. As above, one must be cautious about forming conclusions from schools of such small size.

Among the five charter schools at the top of Figure 3, only one was operating in 1996. The Ombudsman Learning Center--East opened in 1996 serving grades 7-12. The most recent enrollment figures show its 83-member population as 65% white. The two closest traditional public high schools are 80% and 20% white, respectively. Two of the nearest traditional public schools (irrespective of grade levels served), Tavan Elementary (47% white) and Monte Vista Elementary (15% white), are more indicative of the racial/ethnic composition of the surrounding neighborhoods. Residential segregation undoubtedly explains much of this disparity. Finally, Integrity Education Centre Academy (K-12), Career Success--Sage Campus (K-12), Vista Clara (7-12) all opened in 2002 and have no October enrollment data for 2002.

**Tempe Middle-High Schools**

Seven Tempe-based charter schools, all serving (at least) the secondary grades, are shown in Figure 4. Two of these, Pinnacle High School (formerly Arizona Career Academy) and Tempe Prep Academy, have been in operation since 1996. The five remaining charter schools are new to the area (three are completely new and two moved from other locations).

The neighborhoods in the area have, for the most part, become more racially and ethnically rich. The proportion of white students at Tempe High School has dropped substantially since 1996 (.52 to .37). Considering that enrollments at Tempe High have

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7 Similar to the geographic area represented by Figures 12 and 13 in Cobb and Glass (1999).
remained essentially stable (slight decline) during this time, the drop in proportion white students must be explained by racial/ethnic minority students supplanting non-minorities. Less significant declines in proportion white are evidenced at McClintock High School (.60 in 1996 to .54 in 2002), one of six major high schools in Tempe. McClintock’s total enrollments have declined at the same time, suggestive that white families are either leaving or not locating in the area, or choosing an alternative high school.

Arizona Career Academy changed its name (and perhaps its mission?) to Pinnacle High School following the 1998-99 school year. In 1996, Arizona Career Academy enrolled nearly 300 students, 70% of whom were white. By 1998 their numbers dropped, as did the percentage of white students (50%). By 2002, one third of the population of 191 students were white. Something went on here that deserves closer inspection. It is intriguing that the percentage of ethnic minorities went from 30% to nearly 70% over a six-year period. The demographics of the area have indeed become more racial/ethnic minority, but not by such a dramatic shift. One wonders if a change in leadership or school mission resulted in the attraction or recruitment of more racial/ethnic minority families and students?

In 2002, one of the seven charter schools in the area, Pinnacle High School, appeared to be serving a total population of students that mirrors that of surrounding public schools. Two of the charter schools are likely too small to draw any conclusions (Classical Kids Academy and Grand Canyon). Of the four remaining, each enrolls relatively more white students than any of the traditional public schools in the area (81%, 72%, 87%, and 63%). Three of these demonstrate at least a +.18 difference in proportion white relative to the highest proportion traditional public white (that is, +.32, +.18, +.27 compared to either McClintock or Marcos de Niza High Schools’ .54 white). Compared to Tempe High School’s .37 white, the differences in proportion white are +.50, +.26, +.35, and +.44.

Tempe Preparatory Academy (a charter middle school) enrolled 113 students in 1996, 87% of who were white. Located one quarter-mile to the west is Fees Middle School, a traditional public serving over a thousand students. In 1996 Fees Middle School was 50% white. In 1998, Tempe Prep Academy expanded to serve grades 7-12. The proportion of white students at Tempe Prep increased modestly between 1996 and 2002 (.83 to .87), while Fees Middle School witnessed a concomitant decline during that same time period (.50 to .41).

Summary

The longitudinal inspection of several urban charter schools in metropolitan Phoenix provides evidence that racial/ethnic separation is still occurring in those regions. The incidences are not widespread (universal) but neither are they isolated in our view. We draw from these data that racial/ethnic separation is indeed a potential consequence of at least some newly formed charter schools. It appears that charter schools can exacerbate the ethnic separation in already stratified public schools. Moreover, a unique pattern
emerged in this sample suggesting that... More research is needed to determine if this pattern obtains in other communities of the type examined here.

PART II:
2002 racial/ethnic enrollment comparisons of paired charter and traditional public schools

In our previous report (Cobb & Glass, 2001), we used map data to systematically compare the proportion of white students attending a charter school and the closest traditional public school of comparable grade level. Of 98 charter schools inspected, we found two-thirds to be more white than their traditional public school neighbor. Among these, well over half were more than .15 white. Although this particular methodology provides for a less complete picture than the more inclusive mapping technique, it affords a clearly defined, summative description of local charter-traditional public school comparisons.

Phoenix Charter Schools

In an effort to test whether charter schools are exacerbating already racially and ethnically stratified public schools, we examined all Phoenix charter schools which reported 2002 enrollment data to the Arizona Department of Education. After removing four charter schools that were small (under 50 students), we were left with 81 charter middle-high or high schools (most of which served grades 9-12) in the city of Phoenix which were compared to the nearest traditional public school of comparable grade level. In addition, we took each of the traditional public schools (P1) used in these comparisons and paired it with another public school of like grade level (P2). Determination of the other public school (P2) was made by expanding a concentric circle around the charter school until locating the first school beyond P1. During this selection process, every effort was made to avoid selecting comparison schools separated by natural boundaries (e.g., rivers, mountains) or other barriers (major freeways, airports). This served the purpose, in effect, of controlling for the demographics of the student catchment area. The paired comparisons are portrayed graphically in Figures 5a and 5b. This also provided a feel for the "uncontrolled variation" in the set of charter-public comparisons.

The semi-transparent bar in each figure represents +/- .15 difference in white students. Forty-two percent of Phoenix charter schools were more than .15 different than the nearest public school in proportion white (in either direction). Five were less white than the nearest public. Over one-third (36%) of Phoenix charter schools (29/81) were more than .15 white than the nearest public school. Among the public schools used in those paired charter-public comparisons, 26% (21/81)) were over .15 white in either direction. Overall, 7 were less than .15 white and 14 were more than .15 white compared to the other public comparison school.
Charters (mean=.11, SD=.22, n=81)
Publics (mean=.02, SD=.17, n= unique schools)

Note that the schools represented by the columns (or bars) in Figures 5a and 5b do not line up. Paired differences were sorted by ascending order in each case.

Figure 5a. Differences in proportion white (charter-nearest public), Phoenix schools

![Charter vs. Public](chart1)

Figure 5b. Differences in proportion white (public-nearest public), Phoenix schools

![Public vs. Public](chart2)

Tempe Middle-High Schools

Thirteen charter middle-high or high schools (most of which served grades 9-12) in the city of Tempe were compared to the nearest traditional public school of comparable grade level. Two charter schools with very small enrollments were discarded from the
analysis. As above, each of the traditional public schools (P1) used in these comparisons were paired with another public school of like grade level (P2).

The graphs below show the difference in proportion white between the charter and traditional public (Figure 6a) and between the comparison traditional public school and the next nearest traditional public school (Figure 6b). Both figures demonstrate some degree of school-to-school segregation. However, quick inspection of Figure 6a reveals that Tempe charter high and middle schools are, overall, more white than their traditional public school counterparts. The mean of the difference scores is +.22. Nine of the paired comparisons is greater than .15. In contrast, the paired comparisons in Figure 6b show that traditional public schools are more evenly matched and balanced in terms of non-minority enrollments. The mean of the difference scores is -.01. Six of 13 paired comparisons is greater than .15.

Of course, as with the previous maps, a critical assumption of the inferences based on such comparisons is that charter schools draw students from nearby neighborhoods.

**Figure 6a. Differences in proportion white (charter-nearest public), Tempe MS-HS**

![Bar Chart](chart.png)
Discussion

New Trends, Old Trends

Demographic shifts in metro Phoenix.
Still some evidence of ethnic separation. Why is this happening? Admissions (legitimate screening procedures?) Many of the charter schools maintain web sites that provide admissions procedures.
New trend in highly Hispanic areas of more white, more African-American. Noteworthy to follow at this point.

Methodological Challenges

It is worth noting that we faced several challenges in our attempt to study enrollment patterns among Arizona's charter school population. What began as a seemingly straightforward endeavor of tracking longitudinally the racial/ethnic compositions of a selected group of 1996 charter schools turned out to be much more difficult and complicated than anticipated. A number of the 1996 charter schools folded, moved, renamed, or otherwise disappeared. In addition, the proliferation of charter schools in Arizona over the past four to six years has made it difficult to track particular catchment areas and the schools within in them. As an example of this, see Figure 7 below, which shows the changes in charter schools in the same area of roughly nine square miles. Between 1996 and 1998, two charter schools dissolved, one moved, and one showed no data records in 1998 but turned up again in 2002. Between 1998 and 2002, three charter schools had dissolved, one had moved, and eight new ones had emerged.
Beyond the particular methodology employed here, there are other significant obstacles to addressing this question of whether charter schools contribute to the racial/ethnic separation of public school students. For instance, it is unlikely that when asked that parents or students will reveal they chose a charter school due to the ethnic or racial constitution of its student population--if indeed such decisions were based in part on such a criterion. Likewise, charter school directors would not admit to the same--again, were it to be the case--if asked the direct question of whether they target students based on racial/ethnic background. One of the more creative and unrestricted techniques to addressing this question resulted from an analysis of Internet search preferences among Washington, DC parents seeking schools of choice (Schneider & Buckley, 2002). Among the school attributes that parents looked at within the first five links selected during their visits to DCSchoolSearch.com (e.g., facilities, location, staff, student body, test scores), "student body" received the most number of hits (nearly 30%). The next most frequented page was "location" (23%), followed by "test scores" (18%). The logical inference is that parents are concerned with the student make-up at these schools and base their school choice decisions on this factor. Such inferences, of course, are based on certain assumptions. That the number of web site hits to the "student body" web page really meant that parents were seeking information related to racial/ethnic composition, and finally, that they sought this information because they wanted to send their child to schools enrolling students that looked like theirs (and not purposely selected a diverse student body).

Perhaps, in the end, the most important evidence is the student enrollment compositions themselves. If charter schools are more white than nearby traditional public schools then it matters not how it came to be. The point is that it happened and that to many this is an undesirable outcome. This is not to say that instances of racial/ethnic separation that are evidenced by map analysis are suggestive of de jure segregation. This type of racial/ethnic separation is de facto--likely self-selected on the part of parents and students (and perhaps charter schools themselves). If it is happening with any regularity then the policies that created these situations (e.g., selective admissions policies, targeting of specific student populations) must be reviewed. Or perhaps it is new policies should be
created (e.g., requiring student populations that mimic the communities from which they draw their students, a la Massachusetts).

So researchers are left with the systematic task of collecting other relevant data and drawing inferences from such evidence (e.g., enrollment patterns). Even the map analysis presented here, for the most part, relies upon the assumption that the students attending a particular charter school come from the same catchment areas for the (comparator) traditional public schools. But it remains a challenge to obtain student address data for charter school students (in a previous study, Cobb and Glass sent letters of request to several charter school directors requesting student address data. In return for student addresses stripped of names and any identification numbers we would provide a color map of their student catchment area, which could assist with busing routes and schedules, among other planning purposes. Probably hesitant to reveal such personal information, only two charter school leaders submitted data, one of which was a colleague of one of the researchers.)

**Next steps, suggestions for future research**

The challenges and obstacles mentioned above notwithstanding, what is clearly needed here with this study is additional information to better understand some of these shifts in demographics and school populations, school closures and reconstitutions, and the arrival of new charter schools on the scene. Such information would undoubtedly be best collected through qualitative techniques of interview, document retrieval and analysis, historical accounts, and the like.
References


Appendix

(Figures 1-4)
Figure 1. North Central Phoenix MS-HS (1996-2002)

<table>
<thead>
<tr>
<th>School</th>
<th>1996</th>
<th>1998</th>
<th>2002</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Success HS</td>
<td>.74</td>
<td>.80</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>AmeriSchools Academy (opened 1998, 7-12)</td>
<td>.38</td>
<td>.35</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Thomas Jefferson HS</td>
<td>.69</td>
<td>.61</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>Opened 2000</td>
<td>.26</td>
<td>.23</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>Crittenton Youth Academy (opened 1997, 6-12)</td>
<td>.67</td>
<td>.60</td>
<td>nd</td>
<td></td>
</tr>
<tr>
<td>Osborn Middle School</td>
<td>.34</td>
<td>.35</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Osborn College Prep (opened 2002, formerly ABC Learning Center, K-8)</td>
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Key:
- '96 charter
- New since '96
- Close/Moved
- Trad. Public
- Prop. White Enrollment

Note: Enrollment figures are approximate and may not reflect the exact number of students attending these schools.
Figure 3. Southeast Phoenix Schools (1996-2002)

1 mile

No data
Career Success-Sage Campus (K-12, opened 2002)

No data
Integrity Education Centre Academy (K-12, opened 2002)

1996 1998 2002
Monte Vista Elementary (K-5)
.28 .21 .15
1046 995 901

1996 1998 2002
Ombudsman Learning Center-East (7-12)
-.64 .65
-.61 .83
1201 1015 1051

1996 1998 2002
Papago School (K-8)
.17 .17 .14
1210 1054 1028

1996 1998 2002
Academy of Excellence (K-8, opened '98)
-.19 .10
.162 171

1996 1998 2002
Phoenix School of Academic Excellence (7-12, opened '98)
-- .45
-- 20 40

1996 1998 2002
Orangedale Elementary (K-8)
.38 .31 .24
677 705 824

1996 1998 2002
Balsz School (K-8)
.34 .30 .21
708 757 825

1996 1998 2002
Bright Ideas Charter School-Van Buren (K-8, opened '00, district-sponsored, 9-28-01 site closed, 2-13-02 site re-opened)
-.28
-- 61

1996 1998 2002
Gateway Community High School
.70 .64 .44
233 444 270

1996 1998 2002
Wilson Primary (K-8)
.09 .07 .05
581 671 750

1996 1998 2002
Day Star Academy (K-12 but serving 1-7 currently, opened '01, 11-1-01 name changed from Phoenix Challenge Acad.)
-.38
-- 92

1996 1998 2002
Creighton Elem (K-8)
.16 .10 .03
1212 1210 1160

1996 1998 2002
Wilson High School (opened '98)
-.03 .03
-- 97 322

1996 1998 2002
Pro white Enrollment
1996 1998 2002
1 mile

Key
'96 charter
new since '96
closed/moved
trad. public

AIRPORT
Figure 4. Tempe MS-HS (1996-2002)

1 mile

Classical Kids Academy (opened '98, serves K-12)

New School for the Arts (opened '95 in Scottsdale, moved 3.5 miles south to Tempe in July '00)

Tempe High School

Internat'l Commerce Institute (opened '00, middle-high school)

Tempe Prep Academy (middle-high school)

Tempe Accelerated High School (opened '02)

Grand Canyon College Preparatory (opened '97 as G.R.A.D.E. in Mesa, serves 6-12)

Key

'96 charter
new since '96
closed/moved
trad. public

Prop. white Enrollment

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Marcos de Niza High School
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