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Recent trends in gifted identification in Texas

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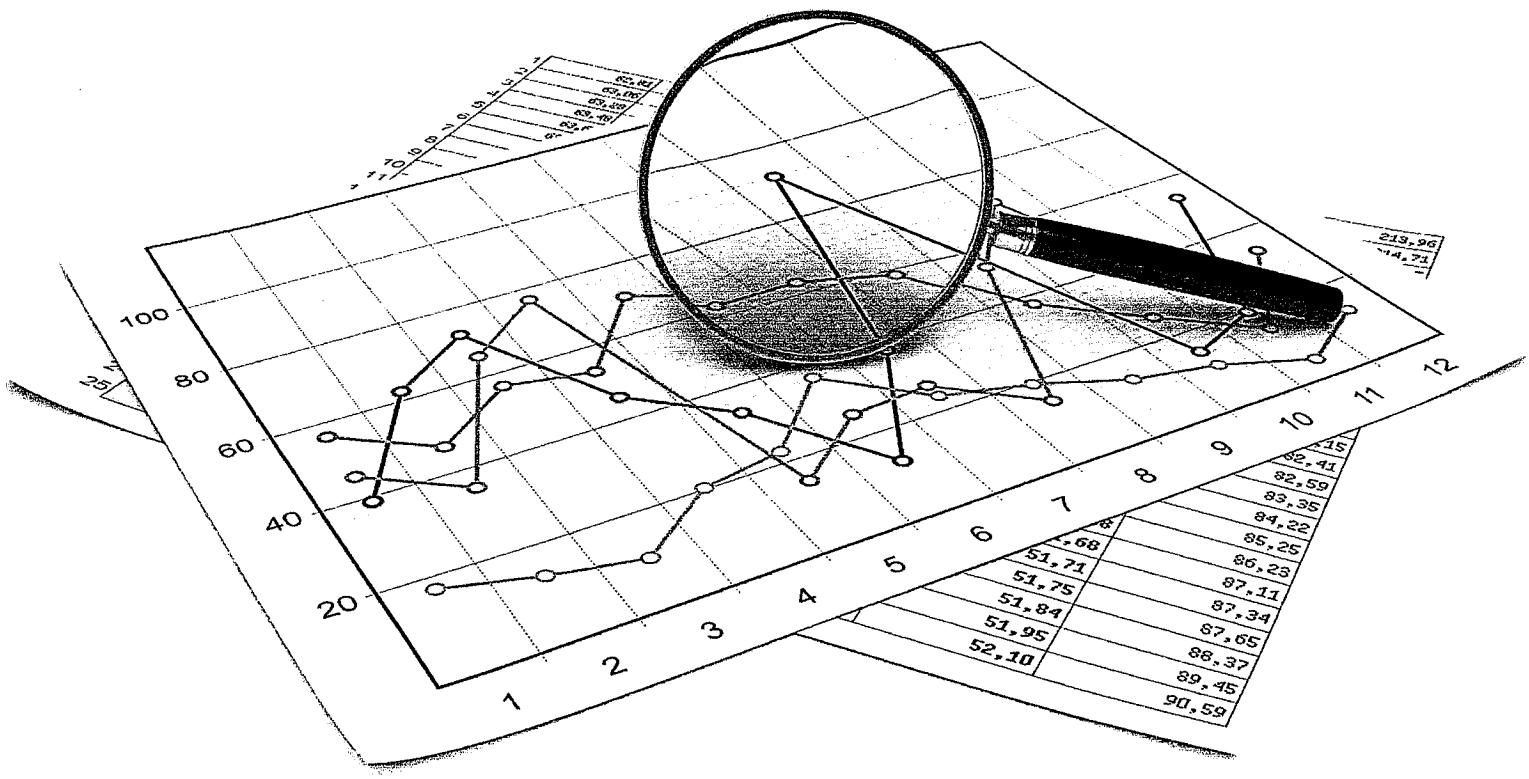

by Russell T. Warne & Joyce Juntune, Ph.D.

In 1977, the Texas legislature passed the first law establishing educational programs for gifted and talented students in the state of Texas (Texas Association for the Gifted and Talented [TAGT], 2008). In response, educators across the state took on the task of identifying and serving gifted students. Clear guidelines, however, were not provided for local personnel until the adoption of the Texas State Plan for the Gifted and Talented in 1990. The State Plan provided districts with guidance in the areas of identification, program design, curriculum and instruction, professional development, and family-community involvement (Texas Education Agency [TEA], 2000).

With state-wide guidelines in place, gifted programs were soon included in the state District Effectiveness and Compliance (DEC) efforts (TAGT, 2008). Compliance teams, which included respected educators of the gifted, visited districts to ensure the gifted and talented students were being properly identified and served. The DEC team examined district documents, visited schools, and interviewed teachers, parents, and administrators, using a manual which provided examples of evidence for each area to be examined as a guide for the visit (TEA, 2001). Following the visit, a report was provided to the district, detailing the areas of compliance and areas that needed the attention of the district personnel. This compliance report was often used by local district coordinators to illustrate to their Board of Trustees their district standing compared to other districts in Texas and to the state standards for gifted education.

In 2003, budget cuts resulted in the discontinuation of compliance team visits. Now services for the gifted fell largely on the shoulders of local coordinators and administrators, with no state oversight. In this study we decided to examine the trends in identification of gifted students over a nine year period, which included the years during and after the compliance visits. Specifically, we asked three questions:

1. What is the current proportion of students in Texas identified as being gifted?
2. Did the percentage of students identified as gifted in Texas change after state oversight of gifted programs was discontinued?
3. Does the type of school (elementary, secondary, or mixed grades) have an impact on how many students are identified as gifted at that school?

As we examined the data, we were not only looking for the identification patterns across districts, but what was happening at the different educational levels within districts.

Methods

The researchers obtained data from the Texas Education Agency's website. The website hosts the state's Academic Excellence Indicator System (AEIS) (TEA, 2008), which reports data on SES, student performance, staff, student demographics, and many other variables at the campus or district level. Every public school in the state is required by law to report this information to the TEA, so the data originate from every campus in Texas. AEIS data are available free of charge to anybody with an internet connection.

The researchers downloaded nine consecutive years of campus-level data from the 1999-2000 through 2007-2008 school years. We used these data to obtain descriptive statistics in order to discover basic statewide trends in gifted identification. Specifically, we were interested in the number of campuses that claimed that they had no or few gifted children, the median percentage of children who were gifted on a campus, and the statewide number and percentage of children identified as gifted.

Although data from every school in Texas were downloaded, not all were used in the study. For each year of data, we eliminated charter schools because charter schools are different enough from traditional

Table 1
Descriptive Statistics, Percentage of Gifted Students on Texas Campuses

Year	N	Median	Mean	SD	Skewness	Kurtosis
1999-2000	5,476	7.38	8.67	7.54	3.48	26.39
2000-2001	5,533	7.37	8.75	7.84	3.97	31.08
2001-2002	5,594	7.35	8.65	7.54	4.14	33.68
2002-2003	5,669	7.29	8.44	6.93	3.87	31.49
2003-2004	5,704	7.17	8.40	6.88	4.12	35.45
2004-2005	5,798	7.11	8.32	6.89	4.37	38.65
2005-2006	5,838	6.96	8.14	6.93	4.59	41.43
2006-2007	5,920	6.84	8.07	7.15	5.06	47.52
2007-2008	6,023	6.73	8.00	7.16	4.93	45.297

Table 2
Statewide Enrollment, Gifted Enrollment, and Percentage of Gifted Children

Year	Total enrollment	Gifted enrollment	Percentage gifted
1999-2000	3,398,128	325,375	9.58%
2000-2001	3,440,371	331,062	9.62%
2001-2002	3,498,858	327,574	9.36%
2002-2003	3,560,939	320,975	9.01%
2003-2004	3,602,802	323,879	8.99%
2004-2005	3,658,768	326,171	8.92%
2005-2006	3,752,824	330,597	8.81%
2006-2007	3,809,434	331,720	8.71%
2007-2008	3,878,055	337,079	8.69%
Average	3,622,242	328,270.222	

Note. Pre-K and K students are excluded from these counts and all analyses.

public schools that grouping them together would distort any analyses. We also eliminated schools that did not have an enrollment of at least 200 students (excluding kindergarten and pre-K students). We eliminated these smaller schools because slight fluctuations in the number of children who are identified as gifted may cause the percentage of gifted students at those campuses to change greatly. The kindergarten and Pre-K students were not included in the study because in many districts, the gifted identification process may start after they have reported their data for the AEIS to TEA. The final number of campuses used each year in the analysis is shown in Table 1.

Results

Table 1 shows the descriptive statistics each year for the percentage of gifted children at a school. The distribution each year on this variable is highly leptokurtic (highly concentrated around the mean or average of scores) and positively skewed (towards the higher end of the curve). The skewed and leptokurtic nature of the distributions is due to the presence of magnet schools—a few of which each year reported that 100% of their students were gifted. In the 2007-2008 dataset, for example, the five campuses with only gifted students were 12.85 standard deviations above the mean. Of course, extreme values have a large impact on the mean and standard deviation, but because when calculating the skewness or kurtosis of a distribution, this impact grows even larger. The larger influence of an extreme value is due to the difference between that value and its mean being cubed in the skewness equation and raised to the fourth power in the kurtosis equation (Thompson, 2006). Therefore, such high skewness and kurtosis in the distributions are expected and merely reflect the presence of extreme values. In fact, in every year of data examined, less than 1.6% of schools were more than three standard deviations away from the mean on this variable.

As shown in Table 2, the statewide number of children identified as gifted remained more or less constant, with an average of 328,270,222 over the course of the nine years. Indeed, in none of the observed years did the number of children identified depart more than 2.7% from the mean. However, the number of total schoolchildren in the state rose consistently. Consequently, the *percentage* of children identified as gifted decreased constantly since the 2000-2001 school year. A related outcome is that the median and mean values of the percentage of children identified as gifted on a campus each year has steadily decreased, as shown in Table 1.

Interpretation

What is the current proportion of students in Texas identified as being gifted?

As Table 2 shows, approximately 8.69% of students who attend schools included in the study are identified as gifted in the 2007-2008 school year. This totals to 337,079 students. Table 1 shows that the mean, or average campus in Texas has identified 8.00% of their students as gifted and the median campus had identified 6.73% of their students as gifted.

Did the percentage of students identified as gifted in Texas change after state oversight of gifted programs was discontinued?

Figure 1 shows the percentage of Texas campuses where personnel are likely underidentifying their gifted students. For the first several years of the study, there was a decreasing proportion of schools claiming to have no gifted children. However, the 2005-2006 and 2006-2007 data showed increases in the number of campuses with no gifted children, which now approximate 2003-2004 levels. The percentage of campuses with 1 to 10 gifted children was fairly steady in the study, although the percentage did climb steeply during the 2005-2006 school year. In 2006-2007, the percentage of campuses with 1 to 10 gifted children did decline slightly, but the percentage was still higher than any point previous to the 2005-2006 gain. During 2007-2008, the percentage was at the highest level out of all of the years examined.

Finally, Figure 1 also shows the percentage of schools in Texas that report that less than 3% of their children are gifted. We chose this threshold because most researchers say that the incidence of giftedness in the general population is at least 3% (e.g., Benbow & Stanley, 1980; Konstantopaulous, Modi, & Hedges, 2001) and any school with less than this proportion of gifted children is most likely underidentifying them. According to this criterion, the number of campuses underidentifying gifted students also decreased steadily since 1999-2000. However, after the low point during the 2003-2004 school year (in which 14.22% of schools reported that less than 3% of their students were gifted), the proportion of schools where personnel are probably under identifying has been rising every year, and the 2007-2008 data show that 16.10% (970 schools) are underidentifying in this manner.

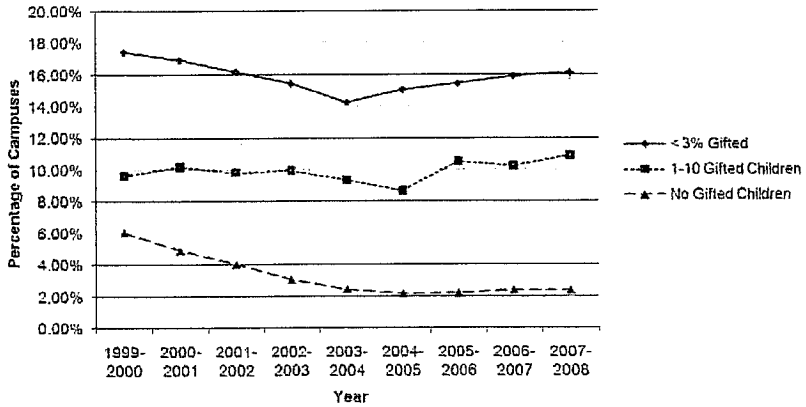

FIGURE 1. Number of Campuses in Texas Reporting Few or No Gifted Children

TABLE 3
MEAN AND STANDARD DEVIATION OF THE PERCENTAGE OF CHILDREN IDENTIFIED AS GIFTED, ORGANIZED BY GRADE LEVEL, 2007-2008

Grade level	Mean	Standard deviation	N[a]
Elementary	6.82	6.32	3783
Mixed	8.30	5.39	133
Secondary	10.10	8.13	2106

Note. Group mean differences are statistically significant for simple contrasts between elementary and mixed schools ($p = .043$), between elementary and secondary schools ($p < .000001$), and between mixed and secondary schools ($p = .011$). The effect size (η^2) for grade level independent variable on the percentage of children on a campus identified as gifted was 4.7%.

[a]One school was excluded because the school had unknown grade levels.

In sum, every index of under-identification that we examined has increased markedly and since TEA visits stopped compliance visits in 2003. It is not possible to say, with the current data, whether the cessation of compliance visits actually caused the rise in (probable) under-identification across the state of Texas. Just because one event preceded another does not mean that the first caused the latter (Slife & Williams, 1995). However, the steady decreases in under-identification that preceded the halting of compliance visits and the steady rises since the 2003 legislative session provide interesting circumstantial evidence that compliance visits provided a needed check on local districts to ensure that they were identifying gifted students at their campuses.

Does the type of school (elementary, secondary, or mixed grades) have an impact on how many students are identified as gifted at that school?

The answer to this question appears in Table 3. In the most recent year for which data are available (2007-2008), personnel at secondary schools and schools with mixed elementary and secondary grades were identifying students at higher rates than schools that only had elementary grades. The differences between the mean percentages of children identified as gifted

were statistically significant when one compared any two types of school (exact *p*-values are displayed at the bottom of Table 3).

With the current data at hand, it is not possible to tell whether the personnel at elementary schools are less likely to find gifted children among their students than the personnel at mixed and secondary schools. The results in Table 3 may mean that schools with mixed grades or only secondary students have overly generous definitions of giftedness. Further research is needed to better understand these results.

Conclusions

It is interesting to note that after 2003, when the DEC visits were terminated, the trend in the reduction of campuses claiming to have no gifted students is now being reversed. The same holds true for campuses reporting that less than 3% of their students are gifted. The gains during the years of compliance visits seem to be disappearing.

The researchers are encouraged that the total percentage of gifted students identified across the state of Texas seems to be holding at between 8% and 9%. Much of the credit for keeping the focus on gifted education in the schools should go to the district coordinators who ensure that the local teachers and administrators are provided with the state required training on understanding and serving gifted and talented students (TEA, 2000).

However, the nagging question remains: if hundreds of schools are underidentifying gifted students and 142 schools claim to have no gifted students, are the schools that identify gifted students labeling non-gifted pupils as gifted? After all, in 2007-2008, 130 Texas schools in 31 districts said that one quarter or more of their students were gifted. Are all of these magnet schools? Are these schools in districts with liberal identification policies? Perhaps at these schools there really *is* a large proportion of gifted students. Given the current data, we simply cannot tell.

With the AEIS data, we also do not know whether the students identified as gifted at a school are actually being served according to recognized best practices in the field (Rogers, 2007). It is possible that at an under-identifying school, the gifted who are identified are served exceptionally well. There is also the possibility that schools with liberal definitions of giftedness have labeled so many students that the non-gifted outnumber the truly gifted in their programs, thereby diluting the quality of the services that the truly gifted so desperately need. Again, the current study is highly limited in its ability to touch upon these issues.

Overall, we are pleased that fewer campuses recently—both in terms of raw numbers and percentages—are underidentifying gifted students when compared to 1999-2000 data. Only 2.36% of campuses (142 schools) during the 2006-2007 school year claimed to have no gifted children, which is much lower than the 6.04% (331 schools) that reported no gifted children in 1999-2000.

As mentioned above, we also cannot tell from the current data whether the cessation of DEC compliance visits caused the drop in identified gifted students in Texas. We hope that another researcher will build upon our work and perform qualitative research in districts where the percentage of students identified as gifted has been declining. Studying those districts' past and present identification processes would improve our understanding of the effect that the compliance visits had on the identification of gifted children in Texas.

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