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AUTHOR Henry, Stephan A.
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ABSTRACT

The School District Data Book (SDDB) of the National Center for Education Statistics contains data on over 15,000 local education agencies (LEAs) that make it possible to compare data aggregated at district, county, state, and national levels on hundreds of variables. The SDDB was used to examine differences between the Topeka (Kansas) public school district and surrounding districts to explore the hypothesis that new growth and investment in infrastructure were taking place in the city while the inner city core was in a slow decline. Comparisons with surrounding districts showed a lower child yield rate for the city schools and a substantially higher percentage of vacant housing. Topeka did not have an unusually high number of schools with high concentrations of minority students. Graphic Information System (GIS) software was also used to determine characteristics of the city schools through Census data. The MapInfo and P-Census programs were used to compile information (presented in three attached pages) on the area to be served by two projected Topeka magnet schools. The SDDB and Census-use tools give researchers new tools to analyze a host of student and household demographic variables and school district data. (Contains 4 tables.) (SLD)

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Research Applications of the National Center for Education Statistics School District Data Book: Lessons Learned from Three LEAs Across the Nation

The Topeka Experience: Uses of the SDDB and other Census and GIS Software in District Planning

Stephan A. Henry, Ph.D.
Topeka Public Schools
Topeka, Kansas

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*Presented as part of an interactive symposium session at the American Educational
Research Association's (AERA) Annual Meeting, San Francisco, California, 1995.*

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Overview of the SDDB

In July of 1994 the NCES released the SDDB on CD-ROM. Data on over 15,000 school districts is included. The SDDB incorporates a special tabulation of the 1990 US Census data aggregated at the school district, county, state, and national level. The Census data is also integrated with administrative and financial data collected by the Census Bureau for the US Department of Education. The SDDB software makes it possible to build tables comparing data aggregated at the school district, county, state, and national levels on hundreds of variables. Data can also be exported in common formats for analysis with other software such as statistical packages making it possible to study interrelationships among the many variables in the system. The SDDB also has some GIS capabilities making it possible to produce thematic maps down to the level of the individual district.

The SDDB brings unprecedented capabilities to researchers interested in analyzing a host of student and household demographic variables as well as school district administrative and financial data. Even small school districts and researchers with limited resources can conduct sophisticated demographic analyses of school districts. The SDDB will prove useful in research and policy analysis studies at all levels of government.

Policy or Research Issues Identified for Study.

Topeka Public Schools is going through a difficult period and suffering from demographic trends which are common in urban areas. The school district boundaries have been static for nearly thirty years. New growth and investment in infrastructure is taking place in the suburbs while the inner core of the city is in a slow decline. My experiences driving around in Topeka suggested to me that the district has a growing number of unoccupied houses and that children are more evident playing outside in the suburbs. To put these "hypotheses" to the test I formulated the following questions and went to the School District Data Book for the answers.

How does the household yield rate for Topeka Public Schools compare with that of surrounding districts?

- Top 100 D17 Households
- Top 100 D022 Households with children 5-17

**Table 1
Household Yield Rates for Shawnee County Districts**

This data obtained using the Profile menu option in SDDB	Topeka Public Schools	Auburn Washburn	Shawnee Heights	Seaman	Silver Lake
Total Households	43061	7852	5102	5808	963
Households with Children 5-17	10000	2674	2083	2191	349
Percent Households with Children 5-17	23.22%	34.06%	40.83%	37.72%	36.24%
<p>Findings: Topeka Public Schools also has a much lower child yield rate for housing that is occupied. Audience & Implications: This information has been shared with the administrative cabinet. It confirms subjective impressions we had about housing trends in the urban versus suburban areas of the county. It appears that families are disproportionately choosing to live in the suburbs.</p>					

How does Topeka Public Schools compare with of surrounding districts in the percent of housing units which are unoccupied?

Top 100 D001 Occupied housing units
 Top 100 D002 Unoccupied housing units

Table 2
Housing Data for Shawnee County Districts

This data obtained using the Profile menu	Topeka Public	Auburn Washburn	Shawnee Heights	Seaman	Silver Lake
Total Housing Units	47553	8328	5297	5909	1039
Vacant Housing Units	4297	533	142	151	42
Percent Units Vacant	9.04%	6.40%	2.68%	2.56%	4.04%

Findings: The census data indicates that Topeka Public Schools has a substantially higher percent of vacant housing units than the surrounding districts.

Audience & Implications: This information has been shared with the administrative cabinet. It confirms subjective impressions we had about housing trends in the urban versus suburban areas of the county. It appears that families are disproportionately choosing to live in the suburbs.

Does Topeka Public Schools, a district under court order to desegregate, have an unusual number of schools with a high percentage of minority students?

Source: Common Core of Data , PCTWYT1 to WYT10 variables; subtracted percent of white students from 100 to get percent minority; caution, this procedure may be problematic due to the way Hispanics are treated in the Census.

Table 3
Frequency of Schools with Various Percentages of Minority Students

Percent of Minority Students	Topeka Public Schools	Kansas	USA
95% or more	0	4	4,405
91-95%	0	3	1,185
81-90%	0	2	2,013
66-80%	1	14	3,222
36-65%	12	89	10,819
21-35%	6	153	8,707
11-20%	12	165	8,868
6-10%	3	247	8,274
5% or less	0	782	24,266
No reported data	0	0	9,611

Findings: It is apparent that Topeka does not have an unusually high number of schools with high concentrations of minority students.

Audience/Implications: This information came to us during the final part of our district court review of our proposed desegregation plan. It might have proved useful in court at an earlier stage.

Use of MapInfo and P-Census in Developing School Profiles based on Census Data

The SDDB has some competition in the private sector in the area of district level analysis of Census data. In fact, if one is interested in doing school level Census reporting it is necessary to purchase a full scale Graphic Information System (GIS) software package. In Topeka we have used MapInfo to compile Census data for school profiles for all middle and high schools. This information is used during the baseline data collection phase of Kansas' Quality Performance Accreditation system. We do not do this at the elementary level since the attendance areas are two small to provide a good match to the Census block groups. Your situation may be different especially if you have large elementary schools. The best way to evaluate this is to overlay the Census block group maps over the attendance area maps and check for fit. The fit will seldom if ever be perfect and the software does some fancy mathematics to compensate.

Another use we have made of P-Census and MapInfo is to compile information on the area to be served by two magnet schools which will replace four racially identifiable elementary schools. In addition to admitting students from across the district, the magnet schools will also have an attendance zone providing automatic admission. About three fourths of the students attending the magnets will live within this magnet zone. Table 4 includes selected Census data gleaned from a printout of some 50 pages of Census data produced with MapInfo and P-Census. A few sample pages of this report are attached to this paper.

Table 4
1990 Census Data for All Persons
Profile Compiled for Proposed Magnet School Zone and Comparison Areas
Using MapInfo and P-Census

The magnet zone will be served by two racially balanced magnet schools replacing four racially identifiable schools.	Magnet Zone	Topeka Public Schools	Shawnee County	Kansas	USA
Total Population	11,337	98,620	160,976	2,477,574	248,709,873
Percent Minority	50.5	19.3	14.4	11.5	24.3
Educational Attainment less than HS	36%	18%	16%	19%	25%
Average Household Income	\$20,833	\$30,933	\$35,282	\$34,184	Not Avail.
Percent Below Poverty Level-Children <18	44%	20%	14%	14%	18%
Speak Only English	89%	95%	96%	94%	86%
No English or "not well"	2%	.64%	.58%	.88%	3%
Vacant Housing Units	14%	9%	8%	10%	10%
Average Value of Owned Housing	\$30,316	\$52,774	\$63,178	\$61,922	Not Avail.

Findings: These Census variables show that the proposed magnet zone takes in an area of the city with relatively high concentrations of minority persons and persons of low income and education levels.
Audience/Implications: This data will be included in the needs assessment section of a federal grant application currently being developed to seek funds for Topeka's new magnet schools. The data provides additional that residential patterns strongly affect the makeup of school populations.

Using Mapinfo In Studying Changes to Attendance Areas

We have extensively used MapInfo and a similar product called MapNet to geocode students onto a district map along with their background characteristics, overlay attendance boundaries, and compile summary data on students captured within the boundaries. Once the students are geocoded on the street maps, MapInfo makes it easy to link on student ID number to bring in and thematically map virtually any student characteristic. We have used inexpensive ink-jet printers and high-dollar plotters both of which produce very impressive maps. The only advantage of the high dollar plotters is that they can be used to print large maps of about 34 by 44 inches. We used these maps last year in public forums and federal court to present our desegregation plan.

Topeka Pub. Schools Dept. of Planning, Eval., & Demographics

Data source: 1990 Census of Population and Housing

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All of U.S.A.

SNAPSHOT: PERSONS Magnet Zone Topeka Public Schools All of Shawnee Kansas Cty

Total Population (\$ base) 11,337 98,620 160,976 2,477,574 248709873

Population/square mile 1,790 2,741 293 30 70

Persons living in households 10,850 96% 95,433 97% 156,901 97% 2,394,783 97% 242050161 97%

Persons in group quarters 487 4% 3,187 3% 4,075 3% 82,791 3% 6,659,712 3%

Male 5,516 49% 46,496 47% 77,410 48% 1,214,860 49% 121172379 49%

Female 5,821 51% 52,124 53% 83,566 52% 1,262,714 51% 127537494 51%

Average age 33.8 37.1 35.9 35.5 35.3

White 6,495 57% 82,487 84% 141,538 88% 2,233,897 90% 199827064 80%

Black 3,782 33% 11,418 12% 13,044 8% 141,957 6% 29,930,524 12%

American Indian/Eskimo/Aleut 249 2% 1,265 1% 1,816 1% 23,250 94% 2,015,143 81%

Asian/Pacific Islander 92 81% 771 78% 1,307 81% 31,114 1% 7,226,986 3%

Other race 719 6% 2,679 3% 3,271 2% 47,356 2% 9,710,156 4%

Hispanic origin (any race) 1,446 13% 5,838 6% 7,319 5% 90,289 4% 21,900,089 9%

Persons 15+ years (\$ base) 8,240 78,278 125,713 1,913,853 195167742

Not presently married 4,535 55% 37,162 47% 52,206 42% 732,077 38% 82,336,251 42%

Now married 3,705 45% 41,116 53% 73,507 58% 1,181,776 62% 112831491 58%

Persons 3+ years (\$base) 10,758 94,335 154,153 2,367,424 237785294

In preprimary/elemen./high sch 2,487 23% 16,643 18% 30,512 20% 481,235 20% 47,070,073 20%

In college 442 4% 6,535 7% 10,170 7% 187,130 8% 17,917,028 8%

Not enrolled in school 7,829 73% 71,157 75% 113,471 74% 1,699,059 72% 172798193 73%

Public school 2,533 24% 19,894 21% 35,457 23% 593,376 25% 54,864,252 23%

Private school 396 4% 3,284 3% 5,225 3% 74,989 3% 10,122,849 4%

Persons 25+ years (\$ base) 6,877 65,378 104,795 1,565,936 158868436

By Educational Attainment:

-- Less than complete high school 2,463 36% 11,979 18% 16,341 16% 293,272 19% 39,343,718 25%

High school graduate 2,644 38% 22,788 35% 37,830 36% 514,177 33% 47,642,763 30%

Some college/college degree 1,770 26% 30,611 47% 50,624 48% 758,487 48% 71,881,955 45%

Persons 16+ years (\$ base) 8,143 77,300 123,599 1,880,434 191829271

By Employment Status:

In Armed Forces 18 22% 238 31% 411 33% 25,454 1% 1,708,928 89%

Civilian participation rate \$ 55.2 64.7 68.1 66.3 64.9

Male civilian part. rate \$ 62.5 71.8 75.4 75.5 74.0

Female civilian part. rate \$ 48.8 58.7 61.6 57.9 56.7

Employed 4,097 50% 47,057 61% 80,143 65% 1,172,214 62% 115681202 60%

Unemployed 388 5% 2,807 4% 3,688 3% 57,772 3% 7,792,248 4%

Unemployment rate \$ 8.7 5.6 4.4 4.7 6.3

Male unemployment rate \$ 10.6 6.1 4.7 6.4 6.4

Female unemployment rate \$ 6.5 5.2 4.1 4.6 6.2

Topeka Pub. Schools Dept. of Planning, Eval., & Demographics
Data source: 1990 Census of Population and Housing

SUMMARY: POVERTY

All of U.S.A.

Magnet Zone
Topeka Public Schools
All of Shawnee Cty
Kansas

Percent of group below the poverty level:

Group	Magnet Zone	Topeka Public Schools	All of Shawnee Cty	Kansas	All of U.S.A.
Total persons	30.6	13.2	10.0	11.5	13.1
Under 6 years	51.0	20.8	15.2	16.8	20.1
6 to 17 years	39.7	19.1	13.3	12.9	17.3
18 to 24 years	41.6	19.1	15.2	21.7	19.4
25 to 34 years	31.4	13.0	10.4	10.3	11.5
35 to 44 years	17.7	9.4	6.9	6.9	8.6
45 to 54 years	16.9	6.1	4.2	6.0	7.5
55 to 64 years	20.9	8.2	6.1	7.7	9.2
65 years and over	16.4	10.4	9.4	12.0	12.8
Male	28.2	11.3	8.7	10.0	11.5
Female	33.0	14.9	11.2	12.9	14.6
White	22.4	9.9	7.6	9.9	9.8
Black	45.3	34.1	32.5	30.0	29.5
American Indian/Eskimo/Aleut	28.6	28.0	20.3	21.6	30.9
Asian/Pacific Islander	39.1	24.4	20.6	22.2	14.1
Other race	28.2	18.1	16.3	21.9	28.2
Hispanic origin (any race)	35.4	17.4	15.9	19.7	25.3

Total persons for whom poverty status is determined (\$ base)

10,853	95,666	157,104	2,391,824	241,978,59
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Below the poverty level:

Under 6 years	685	64	1,768	24	2,135	14	37,548	24	4,331,825	24
6 to 17 years	843	84	2,756	34	3,578	24	55,518	24	7,097,091	34
18 to 64 years	1,588	154	6,583	74	8,179	54	143,254	64	16,533,363	74
65 years and over	210	24	1,532	24	1,843	14	38,303	24	3,780,585	24

Total Families (\$ base)

2,922	25,316	43,025	664,668	65,049,428
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Below the poverty level:

Married couple family	364	124	2,927	124	4,601	114	82,137	124	8,051,821	124
With related children <18	313	114	2,679	114	4,199	104	71,231	114	7,036,169	114
Other family	585	204	1,717	74	2,052	54	27,163	44	3,637,531	64
With related children <18	491	174	1,494	64	1,810	44	23,967	44	3,158,513	54

Topeka Pub. Schools Dept. of Planning, Eval., & Demographics
Data source: 1990 Census of Population and Housing

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EDUCATIONAL ATTAINMENT	Magnet Zone	Topeka Public Schools	All of Shawnee Cty	Kansas	All of U.S.A.
Persons 25+ years (\$ base)	6,877	65,378	104,795	1,565,936	158868436
Less than 9th grade	1,024 15%	4,592 7%	5,989 6%	120,951 8%	16,502,211 10%
9th to 12th grade/no diploma	1,439 21%	7,387 11%	10,352 10%	172,321 11%	22,841,507 14%
High school graduate	2,644 38%	22,788 35%	37,830 36%	514,177 33%	47,642,763 30%
Some college, no degree	1,177 17%	14,537 22%	23,649 23%	342,964 22%	29,779,777 19%
Associate degree	207 3%	2,206 3%	3,575 3%	85,146 5%	9,791,925 6%
Bachelor's degree	267 4%	8,989 14%	15,595 15%	221,016 14%	20,832,567 13%
Graduate/professional degree	119 2%	4,879 7%	7,805 7%	109,361 7%	11,477,686 7%
Less than 9th Grade (\$ base)	1,024	4,592	5,989	120,951	16,502,211
White	605 59%	3,663 80%	4,964 83%	104,943 87%	11,806,669 72%
Black	244 24%	520 11%	556 9%	6,534 5%	2,306,445 14%
American Indian/Eskimo/Aleut	0 0%	54 1%	59 1%	991 .82%	151,214 .92%
Asian/Pacific Islander	6 .59%	38 .83%	69 1%	2,289 2%	557,894 3%
Other race	169 17%	317 7%	341 6%	6,194 5%	1,679,989 10%
Hispanic origin (any race)	276 27%	625 14%	674 11%	9,912 8%	3,445,912 21%
9th-12th Grade/No Diploma (\$)	1,439	7,387	10,352	172,321	22,841,507
White	809 56%	5,601 76%	8,405 81%	148,375 86%	17,355,153 76%
Black	530 37%	1,423 19%	1,514 15%	15,556 9%	3,881,407 17%
American Indian/Eskimo/Aleut	49 3%	125 2%	133 1%	2,132 1%	220,900 1%
Asian/Pacific Islander	19 1%	44 .60%	58 .56%	1,827 1%	411,508 2%
Other race	32 2%	194 3%	242 2%	4,431 3%	972,539 4%
Hispanic origin (any race)	129 9%	447 6%	528 5%	7,574 4%	2,188,309 10%
High School Graduate (\$ base)	2,644	22,788	37,830	514,177	47,642,763
White	1,684 64%	19,660 86%	34,074 90%	478,142 93%	40,891,202 86%
Black	730 28%	2,144 9%	2,437 6%	23,367 5%	4,680,594 10%
American Indian/Eskimo/Aleut	40 2%	306 1%	424 1%	4,269 .83%	313,783 .66%
Asian/Pacific Islander	0 0%	73 .32%	133 .35%	2,534 .49%	799,206 2%
Other race	190 7%	605 3%	762 2%	5,865 1%	957,978 2%
Hispanic origin (any race)	293 11%	1,164 5%	1,482 4%	11,273 2%	2,419,632 5%



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