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Home Schooling in the United States: Trends and Characteristics

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Abstract

Home schooling is a subject of great fascination, but little solid knowledge. Despite its importance, it has received less research attention than some other recent changes in the educational system, such as the growth of charter schools. It could be argued that home schooling may have a much larger impact on educational system, both in the short and long run. This report uses the 1994 October CPS, and the National Household Education Survey of 1996 and 1999 to examine popular characterizations of the home school population. The article assembles evidence from several sources to confirm that home schooling is growing. It finds home-schooled children more likely to be middle

income, white, from larger families, and from two-parent families with one parent not working. While some authors have described a division between religiously-motivated and academically-motivated home schoolers, this research finds more support for a divide based on attitude towards regular schools.

The Impact of Home Schooling

Home schooling is a subject of great fascination, but little solid knowledge. Compared with other recent changes in the educational system, such as the growth of charter schools, home schooling has received relatively little attention (Archer 2000). (Note 1) It could be argued, however, that home schooling could have a much larger impact on educational system, both in the short and long run. This is because home schooling seems to be taking place on a larger scale than many other educational innovations (Lines 1999, Bieleck 2001), because home schooling may have a greater immediate impact on educational practices in existing schools (Hill 2000, Lines 2000b), and because home schooling has brought new institutional forms into being that have the potential to grow over the longer term (Trotter 2001).

Scale

Although other institutional innovations in the educational system have grown in recent years, home schooling is probably the largest change in the sheer number of students involved.

Home schooling directly comprises a larger student population than voucher school programs—at least those that include private schools, that enroll only a few thousand students in a few cities (see Gardner 2000). Home schooling also involves a larger population than charter schools. According to estimates from organizations involved with charter schools, the student population in the fall of 2000 was just over 500,000 (Center for Education Reform, 2001). Even conservative estimates of the number of home schoolers put their numbers at that level or above (Lines 1999).

Organizational changes

Charter schools and voucher systems provide competitive challenges to traditional public schools, and as such, provide a direct incentive to adopt innovations and match the performance of other schools. However, the main outlines of current schooling practice have thus far remained intact. The challenge of home schooling, by contrast, is more profound. Home schooling is a more radical departure from education as it is currently practiced, it affects more schools, and it has the potential to force numerous adjustments to current curricular practices.

Public schools in many jurisdictions have already begun to provide services of various types to home schoolers. Laws in at least seven states permit home schooled students to participate in sports, music and other extracurricular activities in regular schools (Farris 1997). In Florida and Iowa, schools also allow home schoolers to take individual courses.

New Institutions

Perhaps the largest impact of home schoolers has been the concomitant entry of new educational organizations into the field. Many private organizations and enterprises have entered the K-12 distance education field with their sights set on home schoolers as a primary audience (Hill 2000). The State of Florida has developed an extensive set of courses that can be taken over the Internet for high school credit by home schoolers and others who choose to use this resource, and Illinois is developing a similar program (Carothers 2000, Trotter 2001). Meanwhile several for-profit ventures have entered the field, offering courses and, in one case, accredited diplomas over the Internet (Trotter 1999, Walsh 2001).

If home schooling continues to grow, demand will grow for the types of services that are starting to be offered by public schools and distance education providers. A result will be pressure on schools to design school curricula that allow students and parents to pick and choose what they like. According to some observers, another result will be the creation of new schools and school-like institutions built around the common needs and concerns of home-schooling families (Hill 2000) and the growth of public school programs designed specifically for home schoolers (Lines 2000b).

Despite these broad impacts there have been few attempts to examine the characteristics of home schoolers and their households in the U.S. Many studies that have been conducted have relied on highly selective samples (Rudner 1999, Welner & Welner 1999) or have examined selective issues without giving a thorough overview of the home-schooled population (Smith & Sikkink 1999, Welner 2000a, Welner 2000b, Lines 2000b). The two exceptions are reports by Lines (1999) and the National Center for Education Statistics (Bielick 2001) who provide estimates of the home-school population. Lines conducted a careful analysis state education agency records of registered home schoolers, adjusting for probable levels of non-registered home schooling. She estimated that there were 690,000 home-schooled children in 1995. The National Center for Education Statistics report analyzed the results of the 1999 National Household Education Survey, which is also one of the data sets also analyzed in this article. They produced basic tabulations of the characteristics of home-schoolers, including grade equivalent, race, sex, family characteristics, participation in public schools and reasons for home schooling. They found 850,000 home schooled children in the United States. (This is a larger figure than the one reported here, because they decided to include 5-year-olds in the count of home-schooled children, while this report includes only those age 6 to 17.) Prior to these reports, there was also an especially careful attempt by researchers associated with the U.S. Department of Education to reconcile results from two major national surveys measuring the home school population (Henke et al. 2000). Unfortunately, the authors of that publication did not have more recent data available to them.

This article adds to the current knowledge on the subject by looking simultaneously at three national datasets on home schooling. The report takes a closer look at the characteristics of home schoolers and tests for the significance of differences between home-schooled children and others. It examines trends and compositional changes in the home-schooled population. It examines their geographic location and potential for growth. Finally, it examines whether there are identifiable groups of home schoolers

with different reasons for pursuing home-schooling, as has been posited by many observers.

The article proceeds as follows. It starts with a discussion of the data sources used in the analysis. Next the number of home schoolers and the rate of growth is estimated from various data sets. The subsequent section examines characteristics of home schooled children and their families, with a focus on those characteristics most relevant for gauging trends in home schooling. Finally, there is a discussion of some of the implications of home schooling for regular schools and a brief conclusion.

Data on Home Schooling

The data for this project include the 1994 October Current Population Survey (CPS) (U.S. Census Bureau 2000) and the National Household Education Surveys (NHES) of 1996 and 1999 (Nolin et al. 2000). All three are national household surveys of high quality. The CPS relies on a combination of in-person and telephone interviewing of a large sample (approximately 60,000 households) of the U.S. population. I use 24,829 CPS cases where subjects were age 6 to 17. In October of each year, a supplement on school enrollment of children and adults is administered in all CPS households. The content of this supplement varies slightly from year to year, and in 1994 questions on home schooling were added to the main enrollment questions in the supplement for children. The questions differed according to the response to the initial question on school enrollment.

If it was reported that a child was not currently enrolled in school, the child or proxy was asked:

"Were you/Was ... being schooled primarily at home?"

If the child was currently in school the question was:

"Are you/Is ... attending (1) a regular day school, (2) boarding school, (3) schooled primarily at home by someone paid by the school, (4) schooled primarily at home by a parent or other person paid or chosen by a parent, (5) someplace else."

The number choosing answer (3) was relatively small, and for the purposes of this research, responses (3) and (4) were both counted as "home schooling."

The NHES surveys are nationally-representative telephone surveys administered by the National Center for Education Statistics. The two most recent surveys, in 1996 and 1999 have included questions on home schooling. The number of children 6 to 17 was 16,257 in 1996 and 10,718 in 1999.

In both years, the same question was asked of all children:

"Some parents decide to educate their children at home rather than sending them to school. Is ... being schooled at home?"

The datasets also provide several types of information on characteristics of home schoolers and their families. All provide race, Hispanic ethnicity, age, and sex of children. They also provide information on the household: number of adults in the

household, their education, labor force participation and household income. In both the CPS and NHES, income was given in ranges. For regression analyses, these were recoded to the midpoints and differenced from the mean. CPS provided state of residence, metropolitan status and urban/rural location. Although it is traditional to use Census-defined regions for analyses, it was felt that home schooling may not be following traditional patterns. Frey (2000) developed a regional taxonomy that reflects the major migration patterns of recent years, and these are probably more closely related to the types of social trends that would affect home-schooling decisions. The states were recoded to regions following this migration taxonomy. An urban-rural division was developed from metropolitan and urban/rural variables in CPS. (Note 2) In both 1996 and 1999, the NHES asked parents of home schoolers about their motivations for teaching their children at home. Respondents were asked to select reasons from a list of 16.

All analyses in this article use weighted data, adjusted to reflect an assumed design effect of 2.0, except that the standard errors associated with the total number of home schoolers were estimated using the Taylor-series linearization method available in the SAS statistical package. Specific types of analysis are described as they appear in the following discussion.

Extent and Growth of Home Schooling

Table 1 shows the number of home schooled children age 6 to 17 estimated from these data sources. Taken at face value, they show a growth from 360,000 in 1994 to 790,000 in 1999. By 1999, then, around 1.7 percent of children in the 6 to 17 age range were schooled at home. A 95 percent confidence interval for the 1999 figure goes from 670,000 to 910,000. Even at the high end of the range, the home-school population is under 1 million and less than 2 percent of all children 6-17.

Table 1		
Estimates of the Number of U.S. Children Schooled at Home: Current Population Survey & National Household Education Surveys		
	Estimate	Standard error
CPS 1994	356,000	40,000
NHES 1996	636,000	54,000
NHES 1999	791,000	62,000

Under-reporting

Because home schooling has become legal in most states only recently, and because regulations are sometimes cumbersome, there are a number of home-schoolers who have not reported their status to the state or local educational authorities, and would presumably be reluctant to report their status to interviewers. At the same time, other households may claim they are "home schooling" when they keep children away from

school for other reasons or when they instruct their children while also sending them to school. Lines (1999) produced a reasonable estimate of home-schooling by using reports from state education departments in conjunction with estimates of reporting rates from a survey by Ray (1997). It is possible to similarly check the CPS estimates against state agency reports state-by-state.

I examined the 10 states with the highest and lowest reporting rates for which Lines was able to get state education department figures. CPS estimates were slightly lower than the number from state agencies in both cases. (Note 3) If Ray's estimates of reporting rates are reliable, therefore, in states where few home-schoolers reported to authorities, few reported to interviewers. Using a few simplifying assumptions, I calculated an "adjusted" number of home schoolers of 750,000 in 1994. (Note 4) If we assume 8 percent annual growth in home schooling, the NHES estimate from 1999 would be about 25% too low, and the actual number of home schoolers could be close to 1.1 million. However, this estimate depends critically on the validity of Ray's estimates of non-reporting (see discussion in Lines 1999). Until there is better evidence on the true rate of reporting, the unadjusted NHES figures are clearly the best available estimates.

Growth in home schooling

Unfortunately, the point estimates from these data cannot be used directly to make such inferences. The 1994 CPS estimate of 360,000 is not much more than half the size of the 1996 NHES estimate of 640,000. This difference is statistically significant, but is too large to be explained by growth in the home-school population. Hemke et al. (2000), noted that the gap is implausibly large, but were unable to pinpoint an explanation. A likely reason for the discrepancy is the difference in question wording between CPS and NHES. In the CPS, the form of the home schooling question depended on the previous answer to the question on school enrollment. If a household reported children were attending school, they were not asked directly about home schooling, but had to choose it from a list. That this results in a lower response is evident from the extremely low rate of home schooling observed in the subset of CPS respondents who responded affirmatively to the enrollment question. In the CPS, only 190,000 children were reported as in school, but also home schooled. In the 1996 NHES, 450,000 children were reported this way. By contrast, people who initially indicated non-enrollment faced similar yes/no questions on home schooling in both surveys. They were much closer in number—170,000 home schoolers in CPS and 190,000 in the 1996 NHES.

The 1999 NHES data seem also to show growth in home schooling. However, the growth is not quite statistically significant from 1996, given the sample size (the p-value of the 1996 to 1999 difference is between .05 and .10). Since the two NHES surveys are nearly identical in content and methodology, the trend based on these two data points provide the best estimate of growth, but the range is wide. A 95 percent confidence interval provides a range from 3 percent annual decline to 15 percent annual growth.

At the first level of analysis, therefore, we can't say a lot about the growth of the home schooling population. We can, however, refute some of the grander claims that have been made by advocates. The number of home schooled children was well under 1 million in 1999, and the growth rate from 1996 to 1999 was unlikely to have exceeded 15 percent per year.

More evidence on growth

The NHES data are insufficient to show growth in a statistical sense. However, if we can bring additional evidence to bear, we can increase our confidence that growth is actually taking place. One way to get additional evidence on trends in home schooling is to examine trends in reports of school non-enrollment. For children in the prime school-enrollment ages 7-9 and 10-13, published estimates show non-enrollment remained consistently at or below 1 percent from the mid 1950s to the early 1990s. From 1995 to 1999, however, non-enrollment exceeded 1 percent 4 out of 5 years (Jamieson et al. 2001). An increase in the non-enrolled population is not the same as an increase in home schooling, but there is overlap. In the 7 to 14 age range, just under one-half of non-enrolled students were home schooled, according to tabulations from the 1994 CPS, and there is a correlation of around 0.5 between home-schooling and non-enrollment across states. A regression analysis of non-enrollment across years, using CPS data for 1989 to 1999 shows a significant upward trend (data not shown—available from author on request). This confirms that the observed increase in recent years is not attributable to sampling error.

A group that is especially likely to be home schooled consists of two-adult families with one not working (as will be shown below). In this group, 60 percent of non-enrolled children are home schooled. The regression of non-enrollment on years shows an equally large and significant coefficient for this group as it does for all school-aged children.

In sum, evidence on non-enrollment reinforces the direct evidence available from the two NHES surveys: there seems to be an upward trend in home schooling. Other evidence might also be interpreted as supporting this conclusion, including demographic characteristics and geographic location. These are explored next.

Characteristics of Home-Schooled Children

To better understand trends in home schooling it is helpful to know what similarities and differences exist between home-schooled children and those in regular school. If home schoolers are currently limited to a portion of the population with distinct characteristics it is possible that the phenomenon will be self-contained. On the other hand, if those characteristics are becoming more prevalent in the population, then home schooling might grow along with the group in which it's found.

Home schoolers are like their peers in many respects. Table 2 shows how they compare, using data from all three surveys under consideration. Home schoolers are not especially likely to be young or old. They are about as likely to be of one sex or the other, with perhaps a slightly greater percentage female. In some ways, however, home-schoolers do stand out. Home schooled children are more likely to be non-Hispanic White, they are likely to live in households headed by a married couple with moderate to high levels of education and income. They are more likely to live in households with three or more children and they are likely to live in a household with an adult not in the labor force.

Table 2

**Characteristics of Home-Schooled Children and their Families
Current Population Survey & National Household Education Surveys**

	1994		1996		1999	
	Home School	Regular School	Home School	Regular School	Home School	Regular School
<i>Age</i>						
6-7	24.0	17.2	11.7	17.4	13.8	17.8
8-10	30.6	25.6	25.9	25.6	26.1	25.0
11-14	27.8	33.8	34.0	33.1	31.7	32.4
15-17	17.5	23.4	28.5	24.0	28.4	24.9
<i>Sex</i>						
Male	46.8	51.1	42.2	51.5	46.2	50.9
Female	53.2	48.9	57.8	48.5	53.8	49.1
<i>Number of children</i>						
One child	15.2	20.6	18.9	21.2	16.3	21.4
Two children	20.9	39.4	25.8	39.4	29.8	38.3
Three or more	63.9	40.1	55.2	39.4	53.9	40.4
<i>Race, ethnicity</i>						
White	91.9	67.6	86.8	67.7	75.8	64.8
Black	2.8	15.9	2.2	15.6	8.8	16.1
Hispanic	4.4	12.8	8.0	12.5	9.1	13.9
Other	0.8	3.7	3.1	4.2	6.2	5.2
<i>Family structure</i>						
Single parent	11.3	29.9	20.8	30.8	20.6	34.5
Two parent	88.7	70.1	79.2	69.2	79.4	65.6
<i>Non-working parent</i>						
Parents work	34.0	68.1	41.3	72.0	38.8	74.0
Non-working parent	66.0	31.9	58.7	28.0	61.2	26.0
<i>Family income</i>						
Up to 14,999	18.8	23.2	21.1	21.1	12.3	18.6
15,000 to 29,999	14.9	20.4	26.9	22.6	25.7	21.3
30,000 to 49,999	40.4	26.5	29.1	25.5	24.8	23.7
50,000 or more	25.9	29.9	22.9	30.7	37.1	36.4
<i>Mother's education</i>						

Less than h.s.	8.8	17.7	14.2	16.4	5.3	16.4
High school	31.2	35.4	23.6	33.7	28.9	29.2
Some college	37.9	28.9	40.5	28.3	34.3	29.9
Bachelor's	19.3	12.9	17.5	15.1	22.5	16.3
Advanced	2.9	5.1	4.2	6.5	9.0	8.1

Table 3 shows these relationships in a multiple regression framework. This regression can't be interpreted as causal, as it includes several factors that are probably endogenous to the home-schooling decision (e.g., parental work status and household income). What can be seen, however, is the relative magnitude of different influences when taken together. Automatic model selection routines were used to develop a pared down regression equation because some coefficients were sensitive to the inclusion or exclusion of other variables in the model. The initial set of variables included all those in Table 2, along with interactions of all variables with survey year. Two of the effects (the main effect of being Black, and the effect of father's education) were retained even though they didn't meet the cutoff criterion in the selection routine, because of their possible substantive importance.

Table 3				
Logistic Regression of Home-school Status on Background and Family Characteristics: Pooled Data from CPS & NHES				
	Regression Coefficient		Standard Error	t- statistic
Two-parent family	0.313		(0.177)	1.8
Non-working parent	1.337	*	(0.131)	10.2
Income squared	-0.018	*	(0.004)	-4.1
Mother postsecondary educ.	0.601	*	(0.143)	4.2
Father postsecondary educ.	0.293		(0.173)	1.7
Age 14 to 17	0.283	*	(0.132)	2.1
Number of children in household	0.300	*	(0.039)	7.8
Male	-0.213		(0.124)	-1.7
Hispanic	-1.015	*	(0.245)	-4.1
Black	-0.521		(0.348)	-1.5

Black * 1994	-1.584	*	(0.766)	-2.1
Black * 1996	-1.750	*	(0.788)	-2.2
West	0.461	*	(0.160)	2.9
South	0.484	*	(0.146)	3.3
1994	-0.472	*	(0.169)	-2.8
Intercept	-6.170	*	(0.249)	-24.8
Observations	55,204			
Null likelihood	2,936.7			
Residual likelihood	2,606.7			
Difference	330.1			
Model degrees of freedom	15			

* Significant at the .05 level.

Most of the same variables that showed differences across home-school status in cross tabulations were also significant in the regression analysis. Sex and age were retained as marginally significant. It seems that girls are slightly more likely to be home schooled than boys, and teenagers more likely than younger children. Household variables had stronger effects—family structure, mother's education, father's education, region of residence. The number of children in the household had a very strong effect. The main effect of income was not significant. However, the square of income had a relatively strong effect. This indicates that the families most likely to home-school their children are of middle income—neither rich nor poor. Race and ethnicity clearly had strong effects. Hispanics were less likely to be home schooled and Blacks were much less likely to be home schooled—especially in the two earlier years under study, 1994 and 1996. It seems that convergence between Blacks and Whites has taken place from 1994 to 1999, but the effect is not quite significant. We will have to await new rounds of surveys in order to see if this is a sustained trend.

One of the strongest influences on home schooling from Table 3 is that of having a non-working adult in the household. The coefficient of there being a non-working adult is large and highly significant. The cross-tabular results of Table 2 gave a hint that this relationship was diminishing across years, but the interaction with year was not significant in the multiple regression framework. However, the main effect of non-working remains. Sixty percent of home schooled children have a non-working adult in the home, compared with thirty percent of other children. If home schooling is limited to a particular subgroup, it is probably this one.

A major issue arising from the association of home schooling with the presence of a non-working adult is the possible limitations this presents to future growth. Although 40 percent of home-schoolers lived with working adults, at least one adult was in the labor force only part time in most cases (figures not shown). Fewer than 10 percent lived with two full-time working adults. If home schooling is primarily an activity undertaken by

two-parent families with a non-working parent, it could be a self-limiting phenomenon. However, even if home schooling does remain mainly within this group, it has not come close to exhausting its constituency. Seven and one-half million two-adult households have a non-working adult at home, and the number has remained stable in recent years, despite declines in previous decades. More broadly, of 36 million women with children under 18, ten million do not work, and another 6.5 million work part time (U.S. Bureau of Labor Statistics 2000). The number of home schooled children could grow from 790,000 to over 30 million without exhausting this core constituency.

Is it possible that home schooling may spread beyond this core group of two-parent families with a parent at home? Must it also be limited to households where parents have moderate to high education? While it would seem that having a (well educated) parent at home would be a prerequisite for engaging in home schooling, this is not an absolute requirement. Many home school households have working adults and adults with low education. In all three surveys a small number of home-schooled children lived with a single parent or with two adults in the labor force full time. In addition, a small number had no adult in the home with a high school diploma. A follow-up question in the 1999 NHES on participation in regular school by home schoolers showed that many of the home-schooled children who lived with working adults were also attending school at least part of the time. Still, a portion of parents remained who seemed to be defying logic by schooling their children at home without being home themselves. Further exploration of these cases might turn up special circumstances (home businesses, odd working hours, cooperative instructional arrangements) that could provide an explanation. Alternatively, these families could be making use of Internet courseware or other technologies to avoid the need for direct instruction. Many advice books and curricula promise home education can be successful even when parents have little time or training for the job. (Note 5)

Geographic distribution

One final way in which home school children differ from their peers is geographic location, as shown in Table 4. Home schoolers are more likely to be located geographically in places that have been destinations for internal migration. Using a division of the country according to migration patterns developed by Frey (2000), home schoolers are seen to be located in rural and suburban areas of the West which have been the recipient of migration streams from California and other immigration gateway states. Many of these areas have experienced explosive population growth. Growth, however, is not the main feature of areas where home-schoolers are found. The correlation of growth rate and home schooling rate of geographic areas is positive but small (around 0.2). Looking at a scatter plot of the two (not shown) makes it evident that home schooling is not found in booming growth areas nor in areas of decline but in places with moderate to high rates of growth. Nonetheless, if a person wanted to make a case that home schooling is on a path towards further growth, it would not hurt to point out that it is prevalent in growing areas that are at the leading edge of one of the major changes in migration patterns of the last few decades. Home schooling is tied to a broad social trend that has not yet played itself out.



Table 4**Estimated Percentage of Children Home Schooled
by Geographic Location: CPS 1994**

Geographic Region	Metropolitan Status	Lower bound	Point estimate	Upper bound
White gainers	Non-metro	1.69	2.34	3.00
White gainers	Suburb	1.27	1.81	2.34
Melting pots	Non-metro	1.14	1.60	2.06
Black&White	City	0.44	1.00	1.56
Black&White	Suburb	0.68	0.98	1.28
Slow growth	Non-metro	0.60	0.80	0.99
Slow growth	Suburb	0.52	0.66	0.81
Melting pots	Suburb	0.48	0.62	0.76
White gainers	City	0.13	0.58	1.02
Slow growth	City	0.32	0.50	0.68
Black&White	Nonmetro	0.19	0.38	0.57
Melting pots	City	0.22	0.35	0.49

Geographic Definitions*Immigrant melting pots*

California, Hawaii, New Mexico, Texas, Florida, New Jersey, New York

Mostly White gainers

Alaska, Idaho, Montana, Oregon, Washington, Arizona, Colorado, Nevada, Utah, Wyoming

White and Black gainers

Alabama, Arkansas, Mississippi, Georgia, Tennessee, Delaware, N Carolina, S Carolina, Virginia

Slow growth/decliners

Louisiana, Connecticut, Rhode Island, Maine, Massachusetts, New Hampshire, Vermont, D.C., Kentucky, Maryland, W Virginia, Pennsylvania, Michigan, Ohio, Illinois, Indiana, Wisconsin, Kansas, Missouri, Nebraska, Oklahoma, Iowa, Minnesota, N Dakota, S Dakota

Attitudes toward home schooling

The 1996 and 1999 NHES asked parents their reasons for undertaking home schooling, with 16 possible responses. Several themes emerge from these responses. See Table 5. First is the issue of educational quality. The parents of one-half the home schoolers in these surveys were motivated by the idea that home education is better education. A large share also viewed the issue in terms of shortcomings of regular schools: the parents of 30 percent of home-schoolers felt the regular school had a poor learning environment,

14 percent objected to what the school teaches, and another 11 percent felt their children weren't being challenged at school. Another theme had to do with religion and morality. Religion was cited by 33 percent of parents and morality by 9 percent. Practical considerations (transportation to school, the cost of private school) seemed of relatively minor importance. If attitudinal responses are to be believed, home schooling is not primarily a religious phenomenon, although religion is important. Families participating in home schooling do not cite cost as a barrier, even though one might presume that private schools could respond to their academic and moral concerns.

Table 5	
Reasons Given by Parents for Choosing Home Schooling: 1996 and 1999 Home Schooled Children: NHES Surveys	
Reason	Percent
Can give child better education at home	50.8
Religious reasons	33.0
Poor learning environment at school	29.8
Other reasons	23.0
Object to what school teaches	14.4
School does not challenge child	11.5
Family reasons	11.0
Child has special needs/disability	9.0
To develop character/morality	8.5
Other problem with available public/private schools	6.2
Student behavioral problems	5.3
Want private school but cannot afford it	3.4
Child has temporary illness	2.9
Parent's career	2.2
Transportation/distance/convenience	1.9
Could not get into a desired school	1.3

Many discussions of home school as a phenomenon refer to two classes of home schoolers—those from families with religious motivations and those with primarily academic concerns (Dobson 2000, Lines 2000a). To test this proposition, a latent class analysis was performed on the set of attitudinal questions listed above. The two-class model, however, provided only marginally better fit to the data than the null model. The BIC criterion, traditionally used to evaluate the fit of such models (see Raftery 1997), favors the null (one class) model over the two-class model. On the other hand, if weight is given to prior observations of two groups with two different sets of motivations, the

two-class model might be preferred. Table 6 shows some of the characteristics of the two classes that emerge (using modal category extraction) from such a model. The first class of home schoolers contains 90 percent of the total, and resembles the smaller second class in all but a few attitudinal areas. Areas where there was a substantial difference between classes are shown in the bottom four rows of Table 6 (ranked from the largest to the smallest difference in odds of holding the attitude). The second, smaller class was more likely to name academic and other shortcomings of available schools, especially objections to what the school teaches, lack of challenge for the home-schooled child and poor learning environment. Religion was also likely to be named by the second, smaller class, although the effect was smaller than with the academic attitudes.

Table 6		
Latent Class Analysis Results: Characteristics of Two Classes of Parents with Different Patterns of Reasons Given for Choosing Home Schooling: NHES Surveys		
	Class 1	Class 2
Total percentage in class	90.3	9.7
Object to what school teaches	9.1	60.2
School does not challenge child	8.9	36.3
Poor learning environment at school	25.3	64.8
Religious reasons	30.9	59.8

In summary, if there are two classes of home schoolers, they differ mostly in terms of the degree to which they express negative attitudes towards the schools available to them now. No simple division exists between religiously motivated and academically motivated parents. Due to the small sample of home schoolers available in the two NHES surveys, however, the evidence is still fragmentary on this point.

Discussion and Conclusion

Discussion

Although the evidence on characteristics of home schoolers is still incomplete, it is important that we take account of these characteristics now, rather than waiting for further data collections to provide additional detail. Home schooling, despite being smaller and slower-growing than claimed by some advocates, is still an important emerging phenomenon. What it portends for our current system of schools is still unknown.

Home schooling has emerged with, and indeed is linked to, other emerging educational trends—on-line education and other systems that allow families and individuals to choose their own educational paths (school vouchers, charter schools). At the same time,

it flies in the face of trends towards educational standardization, such as national curricula and systems of assessment. Another type of standardization is resulting from establishment of increasingly detailed systems of occupational credentialing and licensure (Adelman 2000). These trends might not be easily reconciled. High stakes testing, especially, has come under strong attack from home-schooling groups (see, for example, Home School Legal Defense Association 2001).

The period of institutional flux now reigning in education may be the start of a departure from the 20th century model of regimented instruction for students entering an industrializing world. Schools seem to have lost some of their legitimacy as they have lost a clear functional role in preparing youth for their role in the larger economic system (cf. Bowles and Gintis 1976, Dreeben 1968). Rather than representing a definite trend towards "individualizing" instruction, however, home schooling may represent an attempt by parents to reclaim the schooling process—to make schooling valuable in ways that are understandable to them through the cultural means at their disposal (Swidler 1986). This is not incompatible with Apple's (2000) description of home schooling as part of "conservative modernization." Yet home schooling may not be linked to a unified conservative agenda in quite the way he describes. There is a true tension between home educators and the school standards movement, just as there is between home schooling and the increasing demand by employers for occupationally specific training and credentials. What these movements have in common is not a conservative agenda but an attempt by each sector with an interest in schooling to gain greater control over the system.

It may be that home schoolers come to create their own, new schools, as predicted by Hill (2000). It may be that home schoolers remain independent. In either case, however, as home schooling grows, calls will continue for existing public schools to provide services that cannot be provided easily by home-school families themselves—such as advanced courses and extracurricular activities. Lines (2000b) has shown how schools in the state of Washington have reacted to this challenge. They have designed special programs and learning centers where parents can often take a more active role in the instructional process. If this continues as a trend, schools will find themselves increasingly opening their doors to parental participation in ways they have not in the past. At the same time, certain families will be allowed to pick and choose among school offerings. The pressures on schools that might result, in an environment with increasing competition from other instructional providers, are easily envisioned.

The alternative to accommodating home schoolers would involve political difficulties. First, home schoolers making no use of regular school facilities could not be counted on to provide political support for school funding. Second, the schools would lose an ally in fighting battles against standardization, test requirements and credentialing that make it increasingly difficult to provide a broad, general education to children. Dealing with home schoolers will require a difficult balance of competing claims. The success of traditional schools in dealing with the home-school phenomenon will depend on school leadership.

Conclusion

The data examined here show that it has established itself as an alternative to regular school for a small set of families, and is poised to continue its growth. In 1999 around

790,000 children between the ages of 6 and 17—around of 1.7 percent of the population that age—were being schooled at home, and in the late 1990s the number was apparently growing.

Home schoolers and their families were different from regular school attenders and their families, but the differences weren't that large. Some of the distinctive characteristics of home schoolers seemed to be decreasing. Home schoolers were likely to be non-Hispanic White, but there was some evidence of fading racial differences over time. Some distinctive characteristics of home schoolers seemed not to be changing very rapidly, but the characteristics needn't be thought of as limitations to future growth. Households with home-schooled children had moderate to high education and income and were located in the rural or suburban West. Home-schoolers were likely to live with two adults, with one not in the labor force or working part time.

We have just begun to see the emergence of home schooling as an important national phenomenon. Unless the needs of parents are met in different ways, it is likely that home schooling will have a large impact on the school as an institution in coming decades.

Notes

The author would like to thank Wendy Bruno for her helpful advice and Karen Kosanovich for providing tables on family employment trends. An earlier version of this article was presented at the annual meetings of the Population Association of America, Washington, D.C., March 2001. I report the results of research and analysis undertaken by Census Bureau Staff. It has undergone a more limited review than official Census Bureau publications. This report is released to inform interested parties of research and to encourage discussion.

1. A search of the ERIC database for 1999 revealed 106 citations under "charter schools," but only 47 under "home schooling."
2. Due to rules of disclosure limitation, there was no complete taxonomy of metropolitan/non-metropolitan status or urban/rural status in the CPS files. In this research a composite measure was created, using the three way central city, balance of MSA and Metropolitan classification if it was available. Otherwise, MSA size was used, with over 5 million classified as "city" and under 100,000 or non-metro classified as non-metro.
3. Lines data were for the 1995 school year, while the CPS data were collected in 1994. I adjusted Lines estimates downward by 5 percent to represent interim growth. If growth were faster, the proper adjustment would raise the estimate of CPS coverage relative to state reports, making my subsequent adjustment for undercount slightly too large.
4. To adjust home schooling to include non-reporting families I simply divided the CPS estimate in each state by the reporting rate found by Ray. Doing so provides a point estimate of well over 1 million home schoolers. However, this result isn't really plausible, as the bulk of the home schooled population turns up in a few states where Ray found extremely low rates (e.g., 0.5 million, or nearly half of all home-schoolers, in Oklahoma). I adopted a the simple assumption that the interview reporting rate is never lower than 20 percent. This eliminated the implausibly large numbers and resulted in what I believe is a fairly reasonable high-end estimate.

5. An example of this is the recent publication of a book entitled *The Complete Idiot's Guide to Home Schooling* (Education Week 2001). Many curriculum providers advertise their wares on the Internet and appear at home schoolers' conferences.

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