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What Do Parents Want From Schools?

Evidence from the Internet

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Abstract. One of the most contentious policy areas in the United States today is the expansion of school choice. While many dimensions of parental choice behavior have been analyzed, perhaps the most enduring questions center on the aspects of schools parents prefer and how these preferences will affect the socio-economic and racial composition of schools. Using Internet-based methodological tools, the authors study parental preferences revealed through information search patterns and compare these to the standard findings in the literature, which are based largely on telephone interviews. Based on this evidence the authors suggest that unfettered choice may lead to undesirable outcomes in the distribution of students, and it may also lead to reduced pressure on schools to improve academic performance.

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School choice is clearly one of the central themes in today's school reform movement. Grounded in their (often ardent) belief in the power of markets, proponents of choice can marshal strong arguments for its expansion. However, in this article, based on the preferences parents reveal for different components of schools, we show that the unfettered introduction of choice can lead to increased segregation, and perhaps even *less* pressure on schools to improve their performance.

Ranging from the expansion of inter- and intradistrict choice to the rapid diffusion of charter schools and including the hotly contested spread of vouchers, the ability of parents to choose their children's schools is growing. As choice has proliferated, researchers have increasingly focused on the role of parents as "citizen/consumers" and how their choice behavior will affect schools under more market-like schooling arrangements (see, e.g., Chubb and Moe 1990, Smith and Meier 1995, Henig 1996, Schneider et al. 2000, Moe 2001).

While many dimensions of parent choice behavior have been analyzed, one of the most enduring is the question of what aspects of schools parents prefer and how these preferences will affect the socio-economic and racial composition of schools, as well as their academic performance. At the core of these studies of parental preferences is the debate about whether or not, given choice, parents will select schools on educationally sound dimensions or make choices based on non-educational ones. In this paper we use Internet-based methodological tools to study parental preferences revealed through information search patterns and compare these to the standard findings in the literature, which are based largely on telephone interviews.

Many doubt the ability of parents to make appropriate choices. The Carnegie Foundation (1992) concluded that "many parents base their school choice decision on

factors that have nothing to do with the quality of education,” including the availability of day care, convenience, social factors, and the range and quality of interscholastic sports. A Twentieth Century Fund report argued that parents are not “natural ‘consumers’ of education” and that “few parents of any social class appear willing to acquire the information necessary to make active and informed educational choices” (Ascher et al. 1996: 40-41). But perhaps even more important, many researchers have argued that the tendency to make ill-informed choices is stronger among low-income parents. Again, according to the Carnegie Foundation, “School choice works better for some parents than for other. Those with education . . . may be able to participate in such programs” (Carnegie Foundation 1992: 20, also see Smith and Meier 1995; Ascher et al. 1996; Henig 1994; Henig 1996; Henig et al. 1999).

A parallel line of research has examined the choice of courses exercised by high school students. In public high schools where students have the freedom to choose from among a wide range of courses, Ravitch (1996) has shown that white and Asian-American students take more academic courses than black and Hispanic students (also Bryk et al. 1993). This evidence suggests that choice within schools can result in increased stratification to the extent that minority students disproportionately enroll in nonacademic courses. Linking these results to school choice, some argue that stratification will be replicated across entire school systems as less advantaged parents choose less rigorous schools.

Moe summarizes the terms of this debate. He argues that a common criticism of parental choice is the idea that “parents cannot be counted on to make choices by reference to sound educational criteria or values.” He continues by noting that critics often argue that “parents—especially low-income parents—supposedly care about practical concerns, such as

how close the school is or whether it has a good sports team, and put little emphasis on academic quality and other properties of effective schooling” (Moe 1995: 26-27).

Moe’s comments highlight the two dimensions underlying the commonly expressed concern for parental choice behavior. The first is the broad indictment that *many* parents will fail to choose schools for their children based on educational quality. If, indeed, large numbers of parents do not value appropriate educational values and base their choice on ancillary or irrelevant school characteristics, schools will have incentives to emphasize the “wrong” performance criteria—for example, the number of football games won rather than the number of students reading at grade level or going on to college. To the extent this occurs, school choice could prove disastrous for the quality of learning across the country, as a large number of parents choose schools for the wrong reason. In a form of Gresham’s law, we could see bad schools driving out good ones as a large number of parents choose schools for the wrong reason.

While this broad-based criticism is often found in the literature, there is a corollary that *only certain types* of parents will be prone to choosing their children’s schools for the wrong reasons. As evident in Moe’s statement, this concern is almost always phrased in terms of the particular susceptibility of low-income and less educated parents to fall for the attraction of non-academic (and thus “wrong”) school attributes.

Here, the issue of the values held by different parents and the concern that, given choice, some schools will skim off of the best students are joined. If low-income parents are unduly influenced by non-academic factors while high-income parents focus their choice of schools on academic dimensions, then the schools will become more stratified as higher income individuals with a concern for academics choose better performing schools, leaving the children of lower income parents behind in low performing schools. This bias in the

selection process would obviously fuel cumulative intergenerational inequality (Levin 1989; Wells 1993; Cookson 1992).

While this aspect of the debate has usually been focused on the presumed predilection of lower SES parents to choose schools on non-academic grounds, there is also another possibility worth considering that would also have adverse effects on schools: if white and wealthier parents select schools on the basis of racial makeup regardless of a school's instructional quality or curriculum, the end result could be highly segregated schools chosen on the basis of race and not academic achievement. To the extent that demographics displaces academic performance in the choices of higher status parents, this could lower pressure on schools to enhance performance—negating one of the main promises of choice.

Given the stakes involved in this debate, the empirical evidence about parental preferences is actually less than compelling, and, more importantly, the evidence is often determined by the research method used. Almost all surveys show that parents, including parents with lower socioeconomic status, endorse the “right” academic values when asked about what they care about in the schools. There are numerous examples. Armor and Peiser (1998) found that in the Massachusetts interdistrict choice program, high academic standards, curriculum and facilities are the three most often cited reasons that parents give for exercising their right to choose. Similarly, Vanourek et al. (1998) found that in evaluating charter schools, most students stressed academics—in their list of what they thought important about the charter schools, “good teachers” was number one, followed by “they teach it until I learn it” and “they don’t let me fall behind.” Similarly, Greene et al. (1998) found that the decision to apply for vouchers in Cleveland was motivated by academic concerns, paralleling the results Kleitz et al. (2000) found in Texas. The Public Policy Forum (1998) reported that when asked about what kind of information they most want about

schools, 85 percent of parents surveyed say that they want information on teacher quality. This result comports with the survey data reported by Schneider et al. (1998) in which teacher quality was the modal response to a question about what parents valued most in education. In short, there is remarkable consistency in the *verbal reports* of parents about what they value in schools—when asked, parents say that their choice behavior is motivated by academic quality.

Moreover, survey data show that the preference for academic aspects is as strong, if not stronger, among parents with lower socioeconomic status and those from racial minority groups as it is among other parents. Kleitz et al. (2000), studying why parents chose charter schools in Texas, report that parents across all income and ethnic groups say they chose charter schools in the hope of achieving a better education for their children and for smaller classes in particular—if anything the percentage of black and Hispanic parents saying that educational quality motivates their choice of charter schools is higher than that among Anglo parents. Kleitz et al. also report that support for educational quality is stronger among low-income parents than among higher income ones, a finding similar to that reported by Schneider et al. (1998—but see Weiher and Tedin 2002).

While many analysts take these results as proof that choice will be driven by academic values and that it will not exacerbate segregation or stratification, there is a skunk at the garden party—these optimistic findings are based on survey data. In contrast, the observed choice behavior of parents yields more complicated (and potentially less benign) results.

There are fewer studies based on actual behavior than studies based on survey data. One of the most widely cited is Henig's (1990) study of enrollment patterns in Montgomery County magnet schools, in which race and class concerns were found central to parental

choices. Henig specifically found that both whites and minorities tended to choose schools in which their children would be less likely to be racially or socioeconomically isolated. But clearly this choice strategy points students in different directions: White families were most likely to request transfer into schools with low proportions of minorities (which were also located in higher income neighborhoods), while minority families were more likely to opt for schools with higher proportions of minority students (which also tended to be in low-income neighborhoods).

Similar to Henig's results, in a study of school choice in Minneapolis, Glazerman (1997) found evidence for an "own-group preference" among minorities and a strong peer group SES effect. While there was also a tendency of parents to select schools with higher test scores, the racial effect was especially strong when choosers faced the prospect of their child being in a small minority. Weiher and Tedin (2002) show that in their choice of charter schools, Texas parents were likely to "sort themselves along racial/ethnic lines...*in spite* of their expressed preferences, rather than in conformity with those expressed preferences."

In their study of the extensive inter-district choice behavior in Massachusetts, Armor and Peiser (1998) found evidence of "skimming" in that families exercising choice were more affluent and more highly educated than the average in the districts they were leaving. The students who changed districts were also less likely to be minorities and their test scores were higher. Choosers were also more likely to transfer to wealthier districts, a result also reported by Fossey (1994).

It should be noted that given the collinearity between socio-economic status and academic performance, parents choosing to enroll their children in more affluent districts were also enrolling their children in higher performing school districts and sorting out the two effects is therefore difficult. Nonetheless, the bulk of this evidence points to a much

stronger effect of race and class on school choice behavior than parents admit to in survey data.

We should also note that the evidence of preferences based on actual behavior is constrained by rules governing choice. Henig argues that the existing composition of magnet schools is only partially a reflection of parent preferences, because clear regulations regarding racial balance rule out transfer requests that would lead to racial imbalance.

In short, research based on surveys tend to find that parents of all races and social class say that they prefer schools that have good teachers and high test scores. And very few admit to being concerned by the race or by class composition of the student body. However, these *stated preferences* are often not congruent with *revealed preferences* documented by studies of behavior¹, which show a much greater role of race and class in the actual choices made by parents.

In our research, we monitor the search behavior of parents as they access information from an Internet site that provides extensive data on all the public schools (both charter and traditional) in Washington DC. By observing the search behavior of parents, we transcend the bias in survey research toward socially acceptable response patterns, a bias that may account for the strong verbal endorsement of academic criteria compared to the pattern evident in actual choice behavior. But the search behavior we study is also not as “costly” as actually moving a child to another school or school district and this search behavior is not constrained by the balancing rules inherent in many choice programs. Thus we may get an even better idea of the place of demographics versus academics in parental preferences than by observing (expensive and constrained) actual choice.

¹ Here we do not refer to “revealed preferences” as commonly used in economics, that is preferences that are uncovered by observing purchasing behavior in the marketplace, but to a more general concept of revealed preferences which can be determined through the observation of *any* (including non-market) behavior.

The Research Site

The site we study, *DCSchoolSearch.com*, is an Internet resource that provides information about local schools to parents in the District of Columbia. It is important to note that this information can be both useful and usable by parents of school age children in DC, who are faced with one of the most rapidly growing choice sets in the country, driven by the expansion of charter schools and an expanding system of intra-district choice.²

DCSchoolSearch.com presents data on all the “traditional” public schools in the District as well as the 30-plus public charter schools that now enroll over 10 percent of the District’s school age children. The site provides a host of information on each school, including location, test scores, student demographics, mission statement, and academic programs.³ There is a core of information (e.g., test scores and student demographics) available on each and every school, but some information (e.g., before and after school programs) is more spotty, since that information is not available centrally and had to be gathered from each school.⁴ When the site was launched, it was supported by an extensive outreach campaign to inform parents about the availability of information and how to access it.⁵

² For an analysis of the charter school movement in DC, see Henig et al. 1999.

³ In contrast to some other school information sites, DCSchoolSearch.com does not include any information on private schools in the city.

⁴ A full discussion of this site and a comparison of DCSchoolSearch.com with two other prominent school-based Internet sites, EPIC (providing information about Milwaukee schools) and GreatSchools.net (providing information about schools throughout California and Arizona) can be found in Schneider and Buckley 2000.

⁵ For example, DCSchoolSearch.com partnered with the DC metro system and put posters in over 300 buses, targeted specifically on bus routes serving low income neighborhoods; had a slide shown in the Union Station multiplex cinema, mixing in information about the service with slides for the local laser eye surgery, the local carpet store, and such; placed posters in local grocery stores, convenience stores, and supermarkets; ran a telephone “hot line” giving callers hands on help negotiating the site and telling callers where they could find public access to the Internet; worked with local churches and parent organizations to disseminate information about the site; hired a PR company and had press coverage, with stories in the Washington Post and several local television and radio stations, as well as on some local TV stations. However, the media campaign was only a sideshow to staff slogging through an endless cycle of community meetings, parent groups, church groups, and school fairs.

To gather information about visitors to the site, everyone wishing access had to fill out a short set of questions to generate a user profile. These questions asked for the status of the visitor (parent, student, other), the education level of the visitor, the person's frequency of Internet use, and the site from which the person was signing on (home, work, school, etc.).

Between November of 1999 and June of 2000, over 2300 unique individuals visited the site. Of these users, the majority, around 60%, were parents, about 10% were current students, and the remaining visitors were in the "other" category, which included DC school officials, curious city residents and non-affiliated education researchers. In this analysis, we look at parent search behavior as an indicator of preferences.

First, we need to note that these parents were definitely not reflective of the general population of DC parents—they were much more highly educated. In Table 1, we report the level of educational attainment of site visitors compared to that of a random sample of DC parents interviewed during a recently conducted telephone survey.⁶

Table 1 About Here

Given the digital divide, such a skewed distribution is not surprising.⁷ In some research, this skewed distribution could cause serious problems. However, we argue that the more educated and motivated parents that are over-represented in our sample are the most relevant group to study because it is their preferences and behavior that may matter most in school choice programs such as found in Washington.

Why? First, recall that the charter schools create what Elmore (1991) calls an "option

⁶ The telephone survey was of approximately 1000 Washington D.C. parents, conducted between September and December of 2001. It was conducted by the Survey Research Center at the State University of New York at Stony Brook.

⁷ The survey data also allow us to examine the effect of race on the digital divide for our population of interest. White parents are significantly more likely to use the Internet more often, controlling for education and income. However, since we do not have information on the race of site users, we cannot pursue this dimension of parent search behavior further.

demand” system of choice. Unlike universal choice programs, under an option demand system new schooling alternatives (such as charter schools) exist alongside neighborhood schools. Option demand choice does not eliminate traditional schooling arrangements but instead seeks to implement change by offering a set of alternatives to a group of parents and students who actively choose to opt out of their neighborhood schools. In fact, the vast majority of choice programs currently in place in school districts across the United States are of this option demand type (see, e.g., Henig 1996).

The characteristic feature of option demand choice is a two-stage choice process. The first stage involves the decision to opt out of the zoned neighborhood school (a parent or student “chooses to choose”). At the second stage of option demand choice, parents/students select their preferred school from the set of possible alternatives.

Given this process, option demand choice plans place more responsibility on the individual parents and student to make schooling decisions. Biases in who exercises choice may emerge as a result of disparities within the population. For example, some parents will have access to more and better information about educational alternatives (Bridge 1978; Henig 1994; Wells 1993). In addition, some parents will be more capable of making informed choice as a result of greater involvement and participation in their children’s education (Wells 1993; Witte, Bailey, and Thorn 1992; Coleman 1987).

In their study of the option demand system in New York City’s District 4, Schneider, Teske and Marschall (2000) study extensively the parents who took advantage of choice. They call these choosers “marginal consumers” and they show how the preferences and behavior of these consumers matter the most in an option demand system. They also show that the marginal consumers are more highly educated and of higher social status than the average parent in the district (also see Meier, Wrinkle and Polinard 2000).

Building on this work, we believe that the parents using DCSchoolSearch.com represent the marginal consumers in the DC choice system. Thus, if we want to know how school choice works and what dimensions are important in the choice process, these are the very “consumers” we should study.

What do the search data show about the preferences of these consumers? In Figure 1, we report the percentage distribution of school attributes *actually looked at* by all parents within the first five “steps” or “moves” they made during their visits to DCSchoolSearch.com. The key assumption of our analysis is that attributes searched early indicate that these are more important to the parent than attributes searched later.⁸

Figure 1 About Here

We can clearly see a strong bias toward accessing the demographic characteristics of the student population, which is in marked contrast to verbal reports about the importance of race. In Schneider et al.’s (1998) study of expressed preferences, for example, less than 5 percent of the parents who were surveyed said that the race and economic background of the students in a school were among the most important characteristics of schools. Yet almost 30 percent of parents looked at student demographic information early in their visit to DCSchoolSearch.com, making it the modal “response” category.

Aside from demographic information, parents were most likely to look at a map showing the location of the school. While the location of a school is important for a variety of obvious reasons (distance from home, access to public transportation, and so on), in a

⁸ Several prominent psychological theories of judgment and decision-making are based on the two assumptions used in our research: that search reveals preferences and that the order of search reveals what is important to the decision maker. These assumptions are most notable in the lexicographic decision rule (Hogarth 1987), and the importance of attributes examined early is also the foundation of Tversky’s (1972) elimination-by-aspects model and is supported empirically by Payne (1976; Payne et al. 1993) in instances of complex decision tasks, for which the choice of school is an exemplar. This idea also, more broadly, underlies the notion of satisficing (Simon 1955; Simon 1957; Simon 1978). For a broader application of these ideas to the study of political choice see Taber and Steenbergen (1995).

highly segregated and stratified city such as D.C., school location also conveys information about the student body.

Furthermore, while many parents say that they are concerned about high quality teachers, in their search behavior, very few parents actually visited the part of the school profiles that give that information. On a more positive note, parents did access test score data and program data in fairly high numbers—but nowhere near a level congruent with verbal reports of preferences.⁹

In Figure 2 we look at the effects of education on these patterns. Following Schneider et al. (2000), we divide the population into those with any level of college education and those without college. The concern for student demographics remains the modal category of action for higher educated parents and is more evident among them than among less educated respondents.¹⁰

Figure 2 About Here

Figure 3 presents another way to test the importance of race in the search process of parents. In this analysis, we examine the search paths of all parents in the aggregate and we focus on the characteristics of the schools that users are “visiting.”

We compute the median percentage of black students for the schools that people are viewing, as well as median percentages of math and reading scores below the basic level on

⁹ There is another problem that flows from using a web-based research tool. In a laboratory setting, stimuli can be narrowly crafted and responses therefore more highly calibrated, but DCSchoolSearch.com was designed both as an information tool to help parents find appropriate schools for their children as well as a research tool. Because it was based on real data and faced the limits of the Internet, the stimuli presented by the site are much “messier” than in a laboratory setting. For example, there are differences in the quality of the data—locational data, test score data, and racial data are centrally collected and easily understood, but other data, on such things as extended day programs, student/teacher ratios, or other measures of teacher quality are harder to collect and verify. Search patterns may be biased by the *a priori* beliefs that parents have in the validity of the data. In addition, not each “page” of the site was identical—some contained more information than others. This too may have produced some bias, but limiting the analysis to the initial stages of search should limit this problem (visitors do not yet know much of the details about each page—they only know the titles).

¹⁰ The differences displayed in Figure 2 are significant at the .01 level.

the SAT-9 standardized test.¹¹ We record these data for the first 10 moves of each unique parent user. If the racial composition of the student body does not matter to parents, then on average we should see that the racial composition of the schools they visit does not change over the course of their search. But if race matters, then as parents move through their search, the racial composition of the schools they are looking at will change. Similarly, if academics matter, then test scores should increase as search proceeds.

Figure 3 About Here

As Figure 3 illustrates, when visitors move deeper into their search, in the aggregate they concentrate on schools that have lower percentages of black students. In marked contrast, as search proceeds, there is no evidence of search focusing on higher performing schools (something that parents *say* they care about).

Statistically, we can assess the significance of the trends apparent in the data by estimating three simple regressions of the school characteristic of interest on the step in the search process and using conventional tests of significance on the coefficient for search step.¹² In Table 2, below, we present our results.

Table 2 About Here

As seen in Table 2, only the coefficient for percent black is statistically significant ($p < .01$). Substantively our analysis predicts that the median percent black of schools viewed

¹¹ We examine median values in the figure instead of means because the data for all three covariates are highly skewed. Nevertheless, similar (significant) results are obtained using mean data.

¹² Since these data are, loosely, time series, we also need to be wary of autocorrelation. Standard diagnostic methods are suggestive of an AR(1) process, so we estimate our models using Prais-Winsten (1954) regression with robust (heteroscedasticity-consistent) standard errors to account for the variation in sample size over time. As an additional test, differences between the endpoints (step 2 and step 10) and between each step in the path were tested using an extremely conservative nonparametric test for differences in matched pairs of observations that requires no assumptions about the distributions of the random variables (Arbuthnott 1710; Snedecor and Cochran 1989). In the case of the percent of black students, the median viewed at step 10 is significantly different from that at step 2 at less than the .01 level. For reading and math below basic level these differences are not significant ($p = .44$ and $.17$ respectively). Results of the tests between each step, as well as summary statistics for the series, are available on request.

declines from 85.7 to 57.8 in 9 steps, while the percent below basic reading and math stay the same over time.

In short, when we move our research technique away from surveys, in which social desirability clearly affects response patterns, to more anonymous search behavior, the results are not as optimistic as those based on survey data. Moreover, this search behavior is more congruent with preferences revealed by the studies of actual choice behavior—parents care about academics but they also care very much about school demographics.

Implications: An Equity/Efficiency Trade-off?

School choice is a complex and contentious issue. And much of the debate about choice often resembles a shouting match in which scholars talk past and around each other. Some of this debate is clearly rooted in a fundamental disagreement about the extent to which market-like arrangements will improve education. But some of the debate is based on disagreement about the empirical support for some of the promises made by advocates of choice. To the extent that this debate involves the preferences of parents, our analysis indicates that we need to be careful about the foundations upon which choice (and our arguments about choice) are built.

Schools are complex, multifaceted organizations, and parents' preferences over the many different things that schools do are correspondingly complicated. To fully understand those preferences and how they may affect school systems, we need to employ a host of research techniques. At minimum, our analysis shows that relying simply on survey data to find out how parents will exercise their expanding rights to choose can lead to an overly optimistic view of what will motivate their actual choices. Although parents will almost always say that academics matter in their choice of schools for their children and almost never admit to caring about student demographics, our data show that race is fundamentally

important to them. These results are congruent with studies of actual behavior showing that race and class are strong determinants of choice.

Many advocates believe that choice can pressure schools to deliver better education more efficiently. Moreover, in a system of choice, parents should be able to place their children in schools that emphasize the aspects of education they embrace. Clearly these gains are desirable. But if, as our data indicate, many parents' decisions are likely to be influenced by race, then a "pure" open market-like choice plan for schools can increase segregation.

Moreover, stratification may also increase if parents with higher levels of education are more likely to exercise choice than less educated parents and are more likely to engage in search activity to gather information about their options. Given the importance of good information to school choice, and given its unequal distribution, special efforts must clearly be made to increase the flow of information to lower status parents. Our experience with DCSchoolSearch.com suggests how difficult it is to expand the flow of information to a broader set of parent/consumers.

Combining the inequality in access to information with the deep-seated concern for the racial composition of schools evident in parent search behavior leads us to a complicated conclusion about markets and school choice. While we believe that the market mechanisms built into expanded choice can increase efficiency, we have two fundamental concerns. First, at the level of parent behavior, we are concerned that unregulated choice may in fact increase the importance of student demographics in the choice behavior of parents, including the more highly educated marginal consumer essential for the effectiveness of option demand systems. This in turn can lead to an adverse outcome at the level of the schools: to the extent that choice is driven by demographics rather than academics, unfettered choice may actually

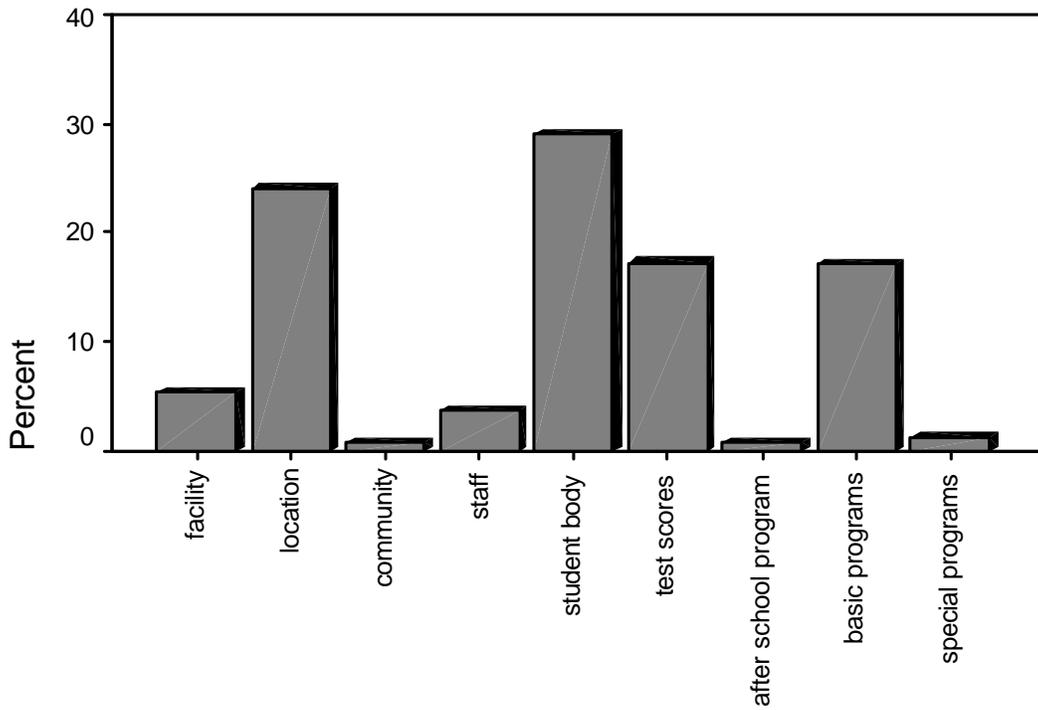
decrease the pressure on schools to improve their academic performance and one of the most basic promises of choice may dissipate.

We believe that the task facing advocates of choice is to design a system that can produce a socially acceptable trade-off between a more efficient school system and one that mixes together children of different races and classes. While less theoretically and ideologically appealing than proposals for unrestricted choice, racial and income requirements can be introduced and enforced in choice plans. Indeed, “controlled choice” has been implemented in a number of cities and school districts and is common in admission decisions to magnet schools (see, e.g., Henig 1994; Henig 1996). However, controlled choice plans all impose regulations that limit choice and may therefore fail to attract the passionate support of the most ardent (and pro-market) proponents of choice. But in every market, we have to strike a balance between equity and efficiency—and the market for schools is no different.

Table 1: Users of DCSchoolSearch.com Were Highly Educated

<i>Education</i>	<i>DCSchoolSearch.com</i>	<i>Telephone Survey</i>
12th Grade or Less	2%	12%
High School Graduate	11%	36%
Some College No Bachelors Degree	28%	30%
Bachelors or Higher Degree	59%	23%

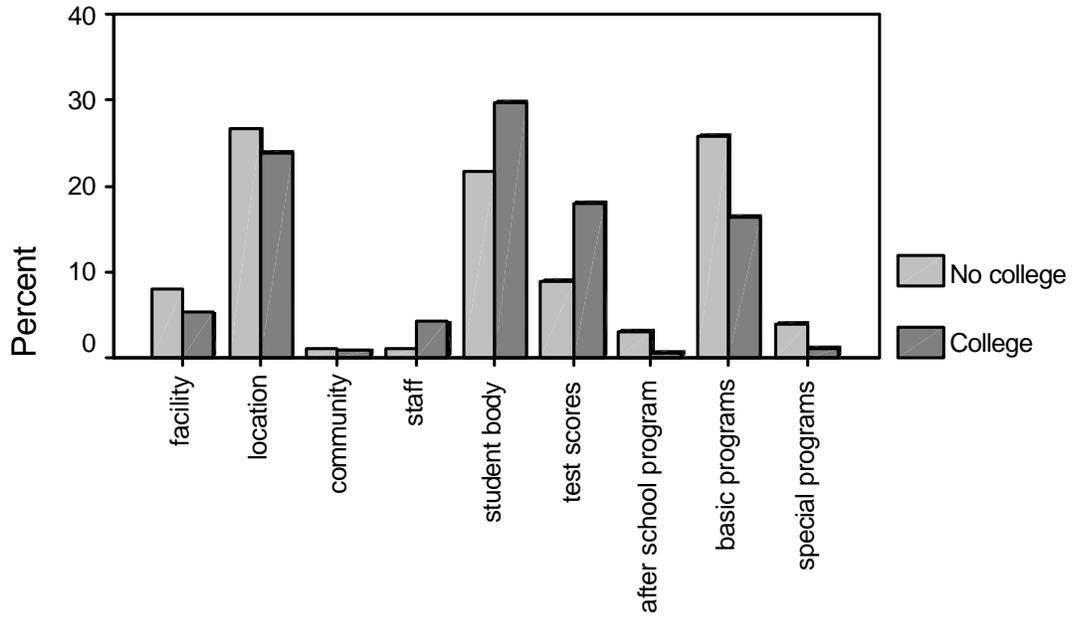
Figure 1: School Attributes Searched



Source: DCSchoolSearch.com

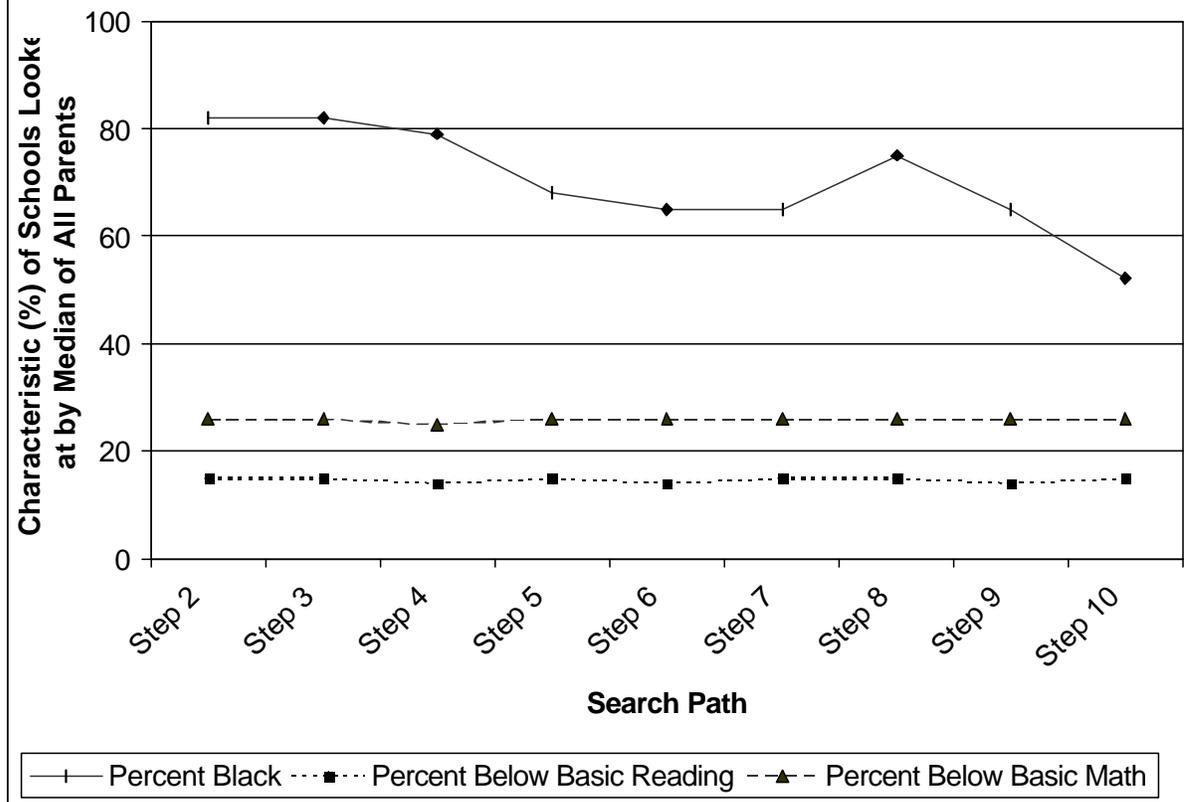
Figure 2: School Attributes Searched

By Education Level



Source: DCSchoolSearch.com

Figure 3: As Search Progresses, Percent Black of School "Visited" Decreases



Note: Paths begin at step 2 because specific school information is unavailable on the first menu screen. The number of observations also varies (between 948 and 1769) over steps as some parents travel between search menus and lists of schools repeatedly.

Table 2: The Decrease in Percent Black Over Steps is Significant While There is No Change in Test Scores

	<i>Step Coefficient (Robust Std. Error)</i>	<i>p</i>	<i>Constant (Robust Std. Error)</i>	<i>R²</i>	<i>Estimated \mathbf{r}^*</i>
Percent Black	-3.1 (.75)	<.01	85.7 (2.7)	.76	.13
Percent Below Basic Reading	-.02 (.04)	.57	14.7 (.22)	.99	-.64
Percent Below Basic Math	.04 (.04)	.32	25.7 (.26)	.99	-.27

* \mathbf{r} is the term for the amount of first-order autocorrelation in the residuals.

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