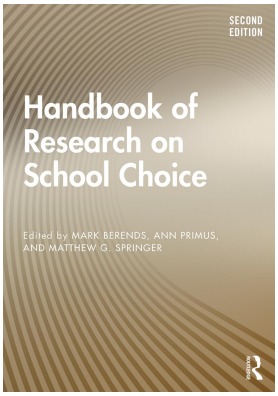

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INFORMATION AND SCHOOL CHOICE

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School choice policies aim to increase the number and variety of schools available to families, especially those that lack quality schools in their own neighborhoods. Under ideal conditions, school choice enables parents to identify and enroll in a school that best meets their needs and is likely to help their child succeed academically. Whether school choice rises to this ideal depends in part on families' ability to make a well-informed choice. In this chapter, we examine the evidence on what parents know about their school choice options, the sources of their information, and how this information is used. We give special attention to how knowledge and information use varies by student and family background. While choice is often aimed at "leveling the playing field," families differ in what they know about schools and opportunities to choose, their sources of information, and their ability to navigate complex enrollment systems. To the extent that disadvantaged families are less well informed, or less disposed or equipped to participate in school choice programs, these policies have the potential to exacerbate, rather than reduce, inequality. These topics are critically important given the increased availability of school choice in the United States and the widespread dissemination of data intended to help parents make more informed choices.

Before reviewing the evidence on information and school choice, we introduce some common theoretical frameworks used in this literature, highlighting key assumptions that are not often made explicit. We go on to examine participation in voluntary school choice programs, connecting differential participation to parental education and access to information. Then we briefly review the research on the demand side of school choice: what parents value when choosing a school for their child, which presumably influences the information they seek. In the following three sections, we summarize the literature on sources of information and how parents use it; we review a small set of studies that have assessed what parents (and students) know about the schools they choose, and whether school choice policies result in more informed "consumers"; and we consider recent experimental evidence on the impact of choice architecture and simplified information about school quality on choices. We conclude with a summary of key lessons learned and directions for future research.

Common Theoretical Frameworks and Assumptions

Research on school choice and the acquisition and use of information comes from varied disciplinary frameworks. These frameworks tend to make different assumptions about the chooser's underlying preferences, values, and motivations; they also focus attention on other influences on

behavior. In our reading of the literature, no single framework perfectly captures the behavior of families choosing schools, and some perform better in certain circumstances than others. To provide a foundation for the studies cited in this chapter, we briefly describe these frameworks.

Rational Choice Theory

Rational choice theory is rooted in economics and is the most common framework in this literature (e.g., Hastings, Kane, & Staiger, 2009). In this framework, families weigh the expected benefits and costs of each school option, selecting the one that maximizes their utility while satisfying their budget constraint. School choosers are assumed to have a priori preferences over school characteristics (e.g., curriculum, teacher characteristics, peers), and to know the costs associated with each school option (e.g., housing costs, commuting time, tuition). Choosers are largely independent actors, uninfluenced by the decisions of other choosers or the choice process itself. Having more choice is unambiguously positive, since families can do no worse by having more options.

In the rational choice framework, school choosers need not have perfect information, and acquiring it may entail costs. But information is valuable to the decision-making process: It can create awareness of previously unknown options, thus expanding their choice set, or deepen understanding of known alternatives, reducing uncertainty and allowing for a more informed choice (Valant & Loeb, 2014). Rational choosers will seek out information if the benefits to doing so outweigh the costs.

Bounded Rationality

Bounded rationality is a framework utilized in psychology, political science, and behavioral economics. It relaxes the strict assumptions of rational choice and identifies settings in which decision makers make less-than-optimal choices (Simon, 1957). In this framework, families aim to make utility-maximizing decisions but rely on simplifications to make them. The reason is often cognitive constraints: In the face of a complex or overwhelming choice, families fall back on shortcuts, or "heuristics."

In the bounded rationality framework, school choosers may not seek out information—even when the benefits to acquiring it outweigh the costs. Instead, they rely on proxies for school quality, such as location or racial/ethnic composition, and may be overly influenced by the opinions of friends and neighbors (Valant, 2014). Boundedly rational choosers may be sensitive to small costs of acquiring information, to framing effects, defaults, or other cognitive biases.

Self-Construal Theory

From the field of social psychology, self-construal theory posits that families' overall orientation toward choice differs depending on their "construal of self," that is, how they perceive themselves in relation to the world around them (Markus & Kitayama, 1991). The preceding frameworks implicitly assume an "independent" construal of self, in which choice is an important form of self-expression, people are inherently choosers, and more choice is usually positive. While this assumption is consistent with the Western, middle- and upper-class experience in which choice is abundant and a part of everyday life, working-class Americans and families from other cultural backgrounds may not share the same orientation toward choice. Rather, someone with an "interdependent" construal of self views her- or himself as inherently connected to others. Under this model, in which relationships are prioritized, the individual is expected to adjust to meet others' expectations (Markus & Schwartz, 2010).

Researchers who view school choice through the lens of self-construal theory are more likely to see preferences as malleable and choices as especially influenced by context and relationships to others.

Social Network Theory

Like construal theory, social network theory emphasizes the role of others in school choice decisions and is most commonly used by sociologists. In addition to being a source of information, social networks may shape preferences themselves and place boundaries on the types of choices and search behaviors that are normatively acceptable. Members of the social network can reinforce ideas of school quality or other desired characteristics and can bring resources to bear that make choices possible, thereby expanding the choice set (e.g., by offering to carpool, or leveraging connections to improve odds of admission to a school). As we will show, social networks are consistently found to be among the most important sources of information about schools, and thus are highly influential on where families ultimately enroll.

Assumptions about the Chooser

It is worth noting that the above frameworks—and most of the literature on school choice—presume that parents make these decisions. While this may be reasonable for families with young children, secondary-aged children have been found to have considerable agency in school choice (Teske, Fitzpatrick, & Kaplan, 2007; Haxton, 2010; Sattin-Bajaj, 2014; Condliffe, Boyd, & DeLuca, 2015). For example, middle school guidance counselors in New York City reported that low-income and immigrant students often lack parental support when applying to high school (Sattin-Bajaj, Jennings, Corcoran, Baker-Smith, & Hailey, 2018). This finding has implications not only for how we interpret observed choices and search behaviors, but also for the appropriate targeting of information and supports for school choosers. It may also explain the significant weight given to nonacademic characteristics in high school choice (Valant & Loeb, 2014; Harris & Larsen, 2015). Unfortunately, little is currently known about students' independent preferences for schools.

Information and School Choice Participation

In many jurisdictions, school choice is a voluntary option rather than an integrated part of the enrollment process. A school district, for example, may permit families to "opt out" of their default neighborhood public school and apply to another school within or outside their district (e.g., Cullen, Jacob, & Levitt, 2005; Carlson, Lavery, & Witte, 2011). Charter schools typically require parents to apply directly to the school or charter network, unless the district operates a unified enrollment process that includes charter schools (Campbell, Heyward, & Gross, 2017). Voucher programs and tax credits that subsidize private school tuition similarly require parents to make an active choice and apply for a voucher or claim a tax credit (e.g., Witte & Thorn, 1996).

Voluntary choice requires familiarity with the program itself, the steps required to participate, and the benefits and costs of available options. Informational requirements are a barrier to entry and raise the possibility that better-informed families will be more likely to participate. A robust literature on participation in school choice programs finds that families who make an active school choice—whether through open enrollment, application to a charter school or voucher program—differ systematically from those who do not participate in these programs. The literature is less clear, however, on whether these patterns are attributable to gaps in information, or to differing interests, preferences, or constraints.

Few studies have measured knowledge of school choice options directly. A potential proxy for knowledge about schools is parental education: One might expect better-educated parents to be more aware of their opportunities. By some measures, households that opt out of traditional neighborhood schools are less advantaged than those who do not, and their children tend to perform worse on standardized tests before opting out (Witte & Thorn, 1996; Bifulco & Ladd, 2006). However, conditional on family income, parents (usually mothers) whose children participate in voluntary school choice are consistently found to have *more* educational attainment.

From the voucher literature, Fleming, Cowen, Witte, and Wolf (2015) contrasted students and families in the Milwaukee Parental Choice Program (MPCP) and traditional public schools. Voucher students had lower household income than students in Milwaukee public schools, but their parents had more years of education, on average. In an earlier study of MPCP, Witte and Thorn (1996) found that voucher parents had more education, were more involved in their child's education, and had higher expectations than public school parents. Campbell, West, and Peterson's (2005) study of the national Children's Scholarship Fund program separated voucher applicants and users and found that both groups had more parental education than their matched comparison group. Parents of voucher users had twice the rate of college completion than applicants.

Studies of charter enrollment rarely have access to data on parental education. However, in one notable exception, Bifulco and Ladd (2006) found that charter school parents in North Carolina had significantly higher rates of college completion than traditional public school parents (45 percent versus 28 percent) between 1998 and 2000. In a follow-up, Ladd, Clotfelter, and Holbein (2017) found little change in this gap five years later as the charter sector in that state expanded.

Studies of open enrollment also tend to lack data on parents. In one study of Chicago high school choice, Cullen et al. (2005) supplemented administrative data with a survey of 8th graders about their parents' level of involvement in their education, and their own educational expectations and perceptions about high school. They found that students opting out of neighborhood high schools were higher achieving and had fewer behavioral infractions than students not making a choice to opt out. Their self-reported expectations were higher, and those choosing academically selective schools had parents with higher levels of educational attainment and involvement in school.

Studies of interdistrict choice, by contrast, have found that families taking advantage of these programs are comparatively *advantaged*. Lavery and Carlson (2015), for example, found that students using interdistrict choice in Colorado were less likely to be eligible for free or reduced-price lunch. In Milwaukee, families using interdistrict choice had higher parental education than families remaining in the city public schools, had higher incomes, and were more likely to live in two-parent households (Witte & Thorn, 1996).

While clear group differences exist in the propensity to participate in school choice programs, the extent to which these differences reflect access to and use of information is unclear. Differential participation may reflect a purposeful benefit-cost calculation on the part of families, or different orientations toward choice altogether. Only a small number of studies have attempted to measure parents' knowledge of their choice options. Howell (2006), for example, surveyed Massachusetts families after the implementation of NCLB and found that, while most parents (70 percent) had heard of NCLB, fewer (52 percent) were aware of its provision giving families the option to transfer out of under-performing schools. Parents with more education, homeowners, and married respondents were more likely to be aware of NCLB and its choice provision, with mothers' education having the strongest relationship with reported awareness.

In some cases, families have a general understanding of their opportunity to choose, but not the steps required to do so. DeArmond, Jochim, and Lake (2014) surveyed 4,000 parents in eight cities and found the most common barriers to school choice were: understanding which schools their child was eligible for (33 percent), transportation (26 percent), and lack of information (25 percent). Fewer parents cited administrative barriers such as application deadlines (21 percent) and paperwork

(14 percent) as obstacles. Notably, parents with less than a high school diploma were much more likely than parents with a bachelor's degree or higher to cite difficulties in understanding school eligibility and a lack of information as obstacles. That some parents may lack critical information when making school choice decisions complicates our interpretation of "revealed preference" studies discussed in the next section.

Informational Requirements: What Parents Want

Whether and how parents acquire and use information about schools depends on their objectives, values, and resources. A large literature on families' preferences regarding schools—and how preferences vary by family background—is informative here. This evidence typically comes from one of two sources: surveys, in which parents are asked what matters most to them in schools, or applications data, which are used to infer preferences over school characteristics.

When asked, families consistently rank academic quality among their highest priorities (e.g., Armor & Peiser, 1998; Schneider, Marschall, Teske, & Roch, 1998; Vanourek, Manno, Finn, & Bierlein Palmer, 1998; Kleitz, Weiher, Tedin, & Matland, 2000; Stein, Goldring, & Cravens, 2010). In their survey of parents in New York City and New Jersey, Schneider, Teske, and Marschall (2000) found that teacher quality and test scores were the two highest-ranked school attributes valued by parents. Responses varied by family background, with college-educated parents more likely to rank teacher quality their top priority than noncollege-educated parents (44 percent versus 28 percent). Noncollege-educated parents were more likely to cite safety as their top concern than were college-educated parents (23 percent versus 10 percent).

Schneider and Buckley (2002) analyzed search behavior on a Washington, D.C. school website and compared parents' actual choices to their stated preferences. They found families appeared to value school demographic information much more than they admitted on a follow-up survey. In a survey of Texas parents who moved from a traditional public school to a charter school, Weiher and Tedin (2002) found that both Black and White parents cited test scores among their top two considerations when choosing their school, and almost none cited the racial or ethnic composition of the school as a factor. However, all groups had moved to a charter school that was more racially distinctive than the school they left behind, and the typical move was to a school with *lower* test scores. This inconsistency could reflect a lack of information about school performance, or an unwillingness to admit the importance of race and social background when making school choices.

Several studies have used rank-ordered school applications from open enrollment or universal choice programs to infer how parents value school characteristics. Glazerman and Dotter (2017) examined school choice applications in Washington, D.C. and found that parents put significant weight on convenience (distance and travel time), school demographics, and academic achievement when ranking schools. Both lower- and higher-income families valued school performance, though the performance metrics predictive of their choices varied. Lower-income families appeared to be influenced by student proficiency rates, while higher-income families appeared to value schools with a higher accountability rating. The authors speculate that the difference may be attributable to the sources of information consulted by parents, since these metrics were available from different resources.

Harris and Larsen (2015) found that lower-income families in New Orleans had weaker preferences for academic performance than higher-income families and were more constrained in their ability to choose higher-performing schools, which were often selective. Families placed as least as much weight on proximity and extra-curricular activities (such as football or marching band) as on academic performance. Noting that families have less firsthand information about schools during the transition grades such as kindergarten and 9th grade, these authors found that publicly available school characteristics were much more predictive of choices in these grades than in others.

Hastings et al. (2009) examined ranked school preferences in Charlotte-Mecklenburg and found that higher-SES parents and parents of students with higher test scores put more emphasis on schools' academic performance than lower-SES parents. As such, high-performing schools serving higher-SES families faced more demand-side pressure than lower-performing schools serving lower-SES families. Glazerman (1998) reached a similar conclusion in his analysis of school applications in Minneapolis. Lincove, Cowen, and Imbrogno (2018) examined the ranked preferences of parents in New Orleans who were able to choose from public, charter, and private schools. They found that parents who included both public and private schools on their application tended to rank private schools higher, even when it meant accepting a school that was lower-performing than their public alternative.

The finding that proximity to home is among the most important school characteristics families value is ubiquitous, as is the finding that proximity is valued more highly by disadvantaged families (e.g., Bell, 2009; Hastings et al., 2009; Harris & Larsen, 2015; Glazerman & Dotter, 2017). Commonly cited explanations include unequal access to transportation, a desire for safety to avoid dangerous routes to school (Condliffe et al., 2015), and parental work schedules. This pattern may also indicate greater familiarity with schools nearby, perhaps due to a limited social network (Rhodes & DeLuca, 2014), unawareness of eligibility for schools further away (DeArmond et al., 2014), or a perception that their odds of admission are lower at these schools (Burgess, Greaves, Vignoles, & Wilson, 2015).

The finding that lower-SES families appear to put less weight on academic indicators than higher-SES families when ranking schools is an important one for this chapter, as it may reflect uneven access to or use of school quality information, or a conception of academic quality that is not well-captured by these indicators. The literature summarized here, however, is largely speculative on this question. Lower-SES families may have different preferences for school characteristics, or they may adjust their choices in response to real or perceived supply-side constraints. It is difficult empirically to disentangle unconstrained preferences from constrained ones. The persistent finding that proximity is central to families' choices (and particularly to low-income families) may reflect families' limited knowledge of more distant schools, heightened concerns about safety, or limitations on their ability to reach faraway schools. (For more on parent decision-making, see Chapter 25 in this volume.)

Information Sources and School Search Behavior

Families gather information about schools through formal and informal sources. By "formal" sources of information, we mean state- or district-provided materials (e.g., printed or digital directories, school "report cards") and third-party resources (e.g., printed school guides, online school search tools, local news media) (Stein & Nagro, 2015). By "informal" sources, we mean information and advice from social networks (e.g., friends, family, other parents) or school personnel (e.g., teachers, guidance counselors). Since the accountability movement of the 1990s and 2000s, and especially the implementation of NCLB in 2002, formal sources of information have grown in abundance (Campbell et al., 2017; Glazerman, 2017; Stein & Nagro, 2015).

Use of formal and informal information sources—and the propensity to obtain information actively or passively—potentially varies by family background. Research on this topic largely relies on self-reports, through survey or interviews responses. That said, a few studies use applications data or search behavior to infer the importance of specific types of information on school choices.

Schneider and colleagues (2000) surveyed parents in New York City and New Jersey and specifically asked how useful various sources of information were in their school choice decision. As parental education rose, they found that the number of useful sources of information cited *declined*, driven by a decline in the reported use of formal sources. In contrast, the importance

of informal sources *increased* with parental education. Lower-income and minority parents relied more on formal and school-based sources of information when choosing schools, while higher-income parents relied more on social networks (see also Weininger, 2014). These authors also asked parents to name up to three people they had spoken with regarding their child's education, along with their demographics and frequency of contact. The modal number of contacts was zero for lower-income New York parents, with roughly 40 percent of parents reporting they spoke to no one about their child's education. In New Jersey, where parental income was higher, the modal number of contacts was three. Neighbors and other parents were most frequently cited as contacts.

Other studies reinforce the importance of social networks to parents choosing schools. In a case study of 48 parents in a Midwestern city, Bell (2009) found that nearly all families relied on social networks for information about schools, and that 75 percent of schools in parents' choice sets had been recommended by social network members. Two survey-based reports by Teske and Reichardt (2006) and Teske et al. (2007) found that the "single most important sources" of information for low- and moderate-income parents were teachers (38 percent) and family and friends (34 percent). Parents also expressed a preference for "word of mouth" over formal printed materials provided by the district. In their survey and focus groups of Camden parents choosing schools, Campbell, Gross, Hernandez, Mccann, and Yatsko (2016) found that parents relied most on the internet, family and friends, and school visits when making their school choice.

Altenhofen, Berends, and White (2016) found that predominately White suburban parents in Colorado who enrolled in charter schools relied heavily on their social networks for school information. These networks were by far the most cited reason for choosing a charter school to begin with (51 percent), and 95 percent of respondents cited social networks as a source of information when applying (93 percent had consulted a school website). Holme (2002) similarly found that White upper-middle-class parents who had recently relocated to suburban districts from urban ones based their judgments largely on the advice of their network and other high-status parents.

Rhodes and DeLuca (2014) illustrate the important link between social networks and parents' perceptions of school quality. In their study of low-income Black families in Mobile, Alabama, they found parents relied heavily on social networks that were local and redundant, meaning additional network members did not provide new information or significantly expand the set of schools considered. Because parents experienced little variation in received information about local schools, they came to assume that all schools were of similar quality.

Guidance counselors and other school staff are potentially key information sources for the school choice decision, but few studies have explicitly examined their influence. In one exception noted earlier, Sattin-Bajaj et al. (2018) conducted interviews with 88 middle school counselors. They examined how counselors engage with students and parents during high school choice in New York City, where all 8th graders are required to apply to a high school and where middle school counselors are responsible for collecting and processing applications. The authors identified three distinct approaches to counseling, which varied from providing action-guiding advice about specific schools (directive counselors) to providing only generic recommendations and procedural information; in schools with directive counselors, students applied and were matched to higher-performing schools. In a related paper, the same authors found that New York students attending schools where their counselor was more willing to recommend (or not) specific high schools were more likely to recall the top choices on their application, suggesting a strong counselor influence (Jennings, Burns, Cohodes, Corcoran, & Sattin-Bajaj, 2017).

Haxton (2010) identified two approaches middle school counselors used in Philadelphia: the "brokering" approach, in which counselors met one-on-one with 7th and 8th graders to help them craft a high school application, and the "clearinghouse" approach, in which the burden of information and decision-making was put on families. Students with less-educated or non-native-born

parents were found to benefit more from the brokering approach, since they "otherwise navigate[d] the high school application process independently" (p. vii).

Finally, in recent years, school marketing has become an increasingly visible source of information for school choosers. Jabbar (2015) found that school leaders in New Orleans responded to perceived competition by investing in "glossification" and marketing strategies to attract and retain students. These strategies included signs, billboards, bus stop ads, flyers and mailings, and outreach via home visits, promotions, school fairs, and open houses. DiMartino and Jessen (2016) similarly described how newly created small high schools in New York City used marketing and branding to attract applicants. To date, we know little about whether and how these marketing efforts have influenced parental decision-making.

A potential risk of relying on schools themselves for information is that they may take advantage of information asymmetries to attract certain students and deter others. Bergman and McFarlin (2018) conducted a randomized experiment in which they sent fictional emails to charter and traditional public schools inquiring about application eligibility. These emails randomly included information about student attributes, including their disability status, poor behavior, or low achievement. The authors found schools were less likely to reply to requests for information when the request signaled behavioral problems, special education needs, or low prior achievement.

What Choosing Families and Students Know About Schools

The research described in the previous section aimed to identify key sources of information that families use when choosing schools, and how reliance on various information sources differs by family background. With a few exceptions, studies have less often sought to assess directly what parents know about their school or other schools they applied to.

Haxton and Neild (2012) used survey data from Philadelphia to assess parents' basic knowledge about high schools they applied to. They focused on objective, verifiable details, or "hard knowledge," versus more subjective "soft knowledge." They found that less than half (41 percent) of parents who had applied to a nonselective lottery admission school were aware that the school was nonselective. Parents who applied to selective schools were more educated, on average, and more likely (71 percent) to identify the correct criteria. In both cases, educated parents and those who spoke with others about their application were more likely to know school admissions criteria. While these criteria were easily identifiable, statistics on admissions chances were not. Haxton and Neild found that only 19 percent of applicants to selective schools could estimate their child's likelihood of admission within 10 percentage points. Thirty-one percent could not provide an estimate at all, while 40 percent significantly over- or under-estimated their likelihood of admission. Neild (2005) similarly found that Philadelphia parents knew few specifics about the schools to which they applied, aside from their theme—whether the school fit their student's interest—their location, and their perception of safety.

Jennings et al. (2017) administered a survey to 8th grade students in New York City shortly after they submitted their high school applications. They found that less than three months after submitting their applications (but prior to receiving a match) 65 percent of students could recall their first-choice high school, 35 percent could recall their second-choice school, and only 30 percent could recall their third choice. A supplementary analysis of interview data found that, even when students could recall the name of the school they applied to, their hard knowledge of the school's admissions requirements, graduation rate, and course offerings was limited. Girls were more likely to recall their choices than boys, and students born outside the U.S. were less likely to recall their choices than native-born students. These findings suggest that these students—who often take an active role in choosing their high school—are only minimally informed about one of the most important decisions in their schooling.

Holme's (2002) study of White upper-middle-class parents relocating to the suburbs painted a similarly grim portrait of parents' hard knowledge of schools. She found that parents knew little about instructional programs or academic performance at the schools they chose or the urban schools they left behind. Only one of the 42 parents in her study had visited the school in their former city neighborhood, and only one in four visited the suburban school they ultimately chose. Parents relied much more heavily on their social networks and the recommendation of other high-status parents.

Buckley and Schneider (2006) conducted a telephone survey of parents in Washington, D.C. to assess their knowledge of student performance at their school. Their primary aim was to discern whether "marginal consumers"—families who had "actively shopped" for their school—were better informed than those who were not. On average, parents significantly over-estimated, by 18 percentage points, the percentage of students at their school reading at or above the basic level. Contrary to expectations, they found that marginal consumers were *less* well informed about this performance measure than families who were not active shoppers. Charter parents had a particularly high degree of error and were much more likely to overestimate student performance in their school. The authors suggest that choosing families may view their school "through rose-colored glasses" or may see it more favorably as an *ex post facto* rationalization of their choice.

Lovenheim and Walsh (2018) also tested the proposition that school choice leads to more informed consumers, specifically whether changes in the school choice environment increase families' use of online school information. They linked geographically identified search data from GreatSchools to the availability of local school choice options, including charter schools, voucher programs, and open enrollment through NCLB. They found that NCLB-induced changes in school choice opportunities led to large increases in the use of GreatSchools. Charter laws and voucher programs had less of an effect, although searches increased with the opening of new charter schools.

The Effects of Information and Choice Architecture on Choices and Outcomes

Few studies have been able to directly link observed school choices and search behavior to information availability and use. However, in recent years, researchers have experimentally manipulated information provided to students and their families—or the way in which this information is presented, referred to as "choice architecture"—to assess how information affects school choices and outcomes. Others have used quasi-experimental designs to examine the effects of informational innovations, such as the introduction of a new school report card or quality indicator, on choices.

Evidence from Field Experiments

Three field experiments in the U.S. have found that providing simplified school information can influence families' school choices and (in at least one case) subsequent student outcomes (Hastings & Weinstein, 2008; Valant & Loeb, 2014; Corcoran, Jennings, Cohodes, & Sattin-Bajaj, 2018). In a seminal study, Hastings and Weinstein (2008) mailed information about school performance and odds of admission to randomly selected parents in the Charlotte-Mecklenburg Public Schools. They found that providing this information increased the fraction of parents choosing high-performing schools by 5 to 7 percentage points, on a baseline of 31 percent. Moreover, students whose families were induced by the treatment to apply to a higher-performing school were found to have higher test scores in later years.

Valant and Loeb (2014) conducted a similar experiment at Milwaukee and Washington, D.C. schools and at a Philadelphia high school fair. They found that families applying to middle schools selected higher-performing schools after being shown an informational booklet containing school

performance and other data, while students applying to high school were more likely to choose lower-performing schools when given similar information. To explain the latter finding, the authors speculated that older students were influenced more by nonacademic aspects of schools, such as extra-curricular activities, when making choices.

Corcoran et al. (2018) conducted an informational experiment in New York City, where rising 9th graders are required to rank up to 12 choices from more than 730 programs in 450 schools. These programs vary in admissions requirements and priorities, which each play a significant role in the matching process. The experiment randomized predominately low-income middle schools to receive a simplified list of proximate high schools that had a strong track record of graduating students in four years. The graduation rate was prominently displayed, and schools were listed in descending order by graduation rate. These lists were customized for each middle school and varied in content and format. Corcoran et al. found that students in treatment schools were significantly more likely to apply to high schools on their recommendation list. While these students did not apply to higher graduation rate schools, on average, they applied to schools where their odds of admission were higher, were more likely to receive their first-choice high school and were less likely to match to a low graduation rate school. Thus, the intervention was effective in nudging students to consider similarly high-performing schools where they were more likely to be admitted.

Interestingly, a subgroup analysis in Corcoran et al. (2018) suggested that informational interventions may not reduce inequality in access to higher-performing schools, since both disadvantaged students—including free and reduced-price lunch eligible Black, Latinx, and students who do not speak English at home—and comparatively advantaged students used the provided lists when choosing schools. In some cases, more advantaged students benefited more from them, since they were more likely to be eligible for academically screened schools on the list. At the same time, children residing in families that do not speak English at home were quite responsive to the intervention and were significantly less likely to match to a low-performing school as a result. This finding suggests that informational interventions may be especially effective with nonnative English speakers and recent immigrants, who are less familiar with their options or intimidated by the complexity of the process (Haxton, 2010; Sattin-Bajaj, 2014; Stein & Nagro, 2015).

Choice Architecture and Online School Information

A recent study by Glazerman, Nichols-Barrer, Valant, and Burnett (2018) examined how the presentation of school information on a web-based search tool affected parents' choices, comprehension, and satisfaction. They randomly assigned participants in an online survey panel to view information about hypothetical schools presented in one of 72 "information displays." These varied with respect to format, the inclusion of a district average reference point, the source of data, the amount of information, and default sort order. With respect to intelligibility, satisfaction, and ease of use, there appeared to be minimal advantages to any one approach. While some displays received more positive ratings than others, the differences were practically small. Glazerman et al. found bigger differences, however, when looking at the effects of display presentation on the characteristics of chosen schools. The default sort order had a meaningful effect on parents' choice of more proximate or higher-performing schools, which was notable since all users could change the sort order if they wished. Parents also chose schools with higher proficiency rates when these statistics were accompanied by icons or graphs, and when the information display was simpler.

While more evidence is needed on the effective presentation of school information for parents choosing schools, Glazerman et al.'s findings are consistent with field experiments that found parents can be "nudged" to choose higher-performing schools when the information provided to them is simple and facilitates head-to-head comparisons (Hastings & Weinstein, 2008; Corcoran et al., 2018).

Evidence from Quasi-Experimental Designs

A related literature has used informational innovations—such as the introduction of school report cards, inspection reports, or other performance labels—in quasi-experimental research designs to assess the effects of information on school choices and markets. Rich and Jennings (2015) found that students in Chicago were more likely to transfer after their school received a low rating on a publicly available performance metric. Nonpoor students were more likely to transfer than poor students when their school was placed on probationary status. The authors speculate that the different responses were due to uneven access to information and/or unequal ability to respond to new information.

In their study of revealed school preferences in New Orleans, Harris and Larsen (2015) found that the introduction of accountability letter grades in 2012 as part of the city's OneApp rollout increased the demand for academically higher-performing schools. They saw little response to the provision of a more comprehensive *Parents' Guide*, however, which included performance data alongside other details about schools.

Finally, other studies have used housing prices to infer the value homebuyers place on school quality and the value of new information (see Black & Machin, 2011, for a review). In a seminal paper, Black (1999) compared the sale prices of similar homes in the same school district and neighborhood that differed only in their elementary school catchment area. She found parents were willing to pay 2.5 percent more for access to a school with 5 percent higher test scores. Figlio and Lucas (2004) examined the impact of school report cards or other publicly available performance data on housing prices and each found the expected response. They found an impact of school letter grades on housing prices in Florida that operated independently from the underlying test scores used to determine the letter grade. In contrast, Imberman and Lovenheim (2016) examined whether the highly publicized release of teacher value-added scores in Los Angeles revealed new information about school quality that was in turn capitalized into housing prices. They found no impact of this information.

These quasi-experimental studies are valuable in that they offer prima facie evidence that school quality matters to homebuyers, and that publicly available information about school performance can affect the demand for schools, neighborhoods, and homes. However, they only offer indirect evidence on the specific role information plays in the school search.

Discussion

For school choice to live up to its promise of promoting broader access to high-quality schools, families must have the information required for a well-informed choice. As this chapter has shown, there is little direct evidence on what families know about schools and their school choice options, and available evidence suggests that both disadvantaged and advantaged parents have limited knowledge when it comes to their own school or others in their choice set. In this section, we discuss promising directions for future research.

As we have demonstrated, the existing literature is often focused on the role of family background (e.g., socioeconomic status, maternal education) in school choice decisions. It is commonly assumed that the association between social background and information seeking, for example, is similar irrespective of the stage of education under consideration (e.g., pre-K versus high school), or the particular needs of the child (e.g., students with and without disabilities). There is a need for additional research that attempts to understand whether and how social background attributes function in varied ways at different stages of students' educational careers, and for consideration of how children's needs may influence the information sought. Because families generally have multiple children in school simultaneously, it is also important to consider how they balance and weigh the potentially conflicting educational needs of their children.

We also encourage enlarging the study of the actors involved beyond mothers and beyond the confines of the nuclear family. Parties beyond mothers—such as older siblings, cousins, aunts, mentors, or coaches—may play a role in providing and processing information, but we know little about the roles that these parties play. Moreover, the educational settings in which children are embedded (e.g., child care centers when children are young, or schools when they are older) may offer different types of support and guidance to families. The literature on college choice has determined that these settings influence students' college choices, and it follows that they may affect K–12 choices as well.

A final area for future research is to better conceptualize and understand the role of the local choice context in affecting information use. The number of proximate options likely plays a part; a setting with a smaller number of options may produce a different type of information seeking and use than one with a larger number. Likewise, a setting in which all families are required to choose may produce different types of use than those in which there is a default option, and those districts in which there is more between-school variation in quality may also elicit different behaviors than those where quality is compressed.

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