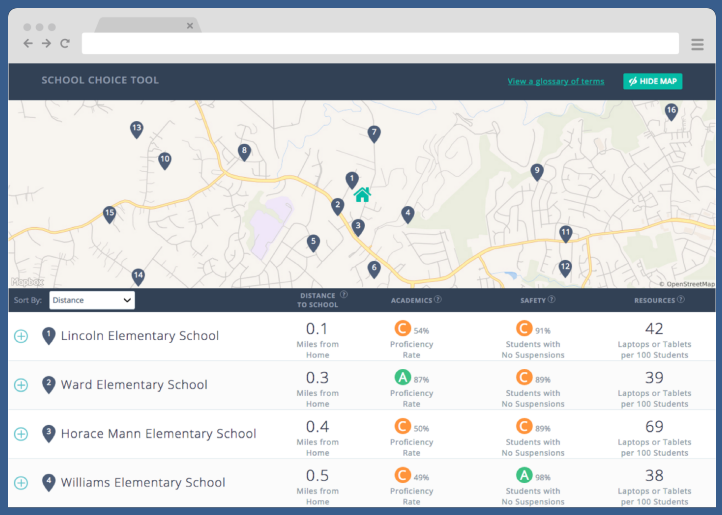
NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE
Institute of Education Sciences

STUDY SNAPSHOT
October 2018



Presenting School Choice Information to Parents: An Evidence-Based Guide

In an experiment testing different strategies for presenting school choice information, parents generally preferred information displays that had graphs as well as numbers, more rather than less data, and a list of choices ordered by each school's distance from home. But showing schools ordered by their academic performance made parents more likely to pick a higher performing school for their child.

Why this study

More than ever, school districts and other organizations need to provide parents with information about school quality and their school choices. Across the country school choice is expanding in ways that provide opportunities -- and challenges -- for parents to select the schools that best fit their children's needs. And, the federal Every Student Succeeds Act of 2015 now calls for every school to have a report card that makes data available to families in an "understandable" and "user-friendly" manner.

Yet little is currently known about how variations in the ways school information is presented might help or hinder parents as they make choices. Research in fields outside of education provides some hints about how the visual representation, amount, and organization of school information might affect parents' understanding of and satisfaction with the information and their choices. In testing some possible strategies and publishing this guide, the Institute of Education Sciences hopes to make decisions easier for information providers, who develop and distribute school directories, choice websites, and report cards and, ultimately, for parents.

What was studied and how

Thirty-five hundred low-income parents[1] participated in an online experiment. Each parent was randomly assigned to see one of 72 different web pages displaying information for a hypothetical school district (see example above). All displays included profiles for 16 elementary schools with four categories of information important to many parents[2]: school's distance from the parent's home, academics, safety, and resources.

The information displays varied in:

- The visual representations, if any, included to illustrate academics and safety data
- How much information was provided
- How the 16 schools were ordered when parents first viewed the information display

After viewing their assigned display, parents answered questions that assessed: (1) understanding (i.e., how many questions about the schools they answered correctly), (2) if they felt the display was easy to use, (3) if they were satisfied with the data displayed, and (4) which schools they would choose given what was shown.

The findings

- ***Parents were most satisfied with school data showing graphs in addition to numbers, but displays using only numbers were most understandable.*** One of the most important issues information providers grapple with is how to present numerical data — such as how many students in a school tested as proficient on a state assessment. Research indicates that graphs and icons (e.g., color coded letter grades) can help people organize and interpret information[3]. However, parents best understood displays without these visual representations, even though they reported preferring them (See Table 1).

- ***Parents generally preferred displays that included more information.*** Parents were more satisfied with displays showing multiple indicators to describe distance from home, academics, safety, and resources than they were with displays showing just one key indicator for each. Adding parent ratings to official school indicators was also more satisfying than the official information alone. This is in line with research suggesting that parents value other parents' opinions. But more information wasn't always better: for example, displays that added district averages — meant to provide context for each school's profile — were actually less satisfying to parents and also harder to use (See Table 1).

- ***Parents chose higher performing schools when schools were ordered by academic quality but were most satisfied with displays that ordered schools by distance from home.*** Currently, there is no standard practice for ordering schools when showing parents their options. For example, online displays for Washington, DC, New Orleans, and Detroit, initially present schools ordered by distance from home, alphabetical by name, and academic performance, respectively)[4]. The study compared displays that ordered schools from closest to farthest from home to those that ordered schools from highest to lowest academic quality. Parents were most satisfied and best understood information when schools were ordered by distance from home. But when schools were ordered by academic quality instead, parents chose schools with higher academic quality (See Table 2).

Table 1

Format used to visually represent data			
Strategies tested:	**Understanding**	**Ease of Use**	**Satisfaction**
Numbers only	75.0^	86.0	90.0
Numbers and icons	72.5	86.0	89.5
Numbers and graphs	72.0	86.0	90.5^
How much information			
Strategies tested:	**Understanding**	**Ease of Use**	**Satisfaction**
General Amount of Information:			
Lower Amount	73.5	86.5	89.5
Higher Amount	73.0	86.0	91.0^
Parent Ratings Included or Not:			
District Data Only	73.5^	86.0	89.0
District Data + Parent Ratings	73.0	86.0	91.5^
District Average Included or Not:			
Not District Reference	73.5	86.5^	90.5^
District Reference	73.5	86.0	89.5

Note: Cells highlighted in blue with the caret (^) meet the study's threshold for statistical confidence that the strategy is better than the other(s) tested. Understanding, Ease of Use, and Satisfaction were measured on a 0-100 scale.

Table 2

Initial Ordering of Information				
Strategies tested:	**Understanding**	**Ease of Use**	**Satisfaction**	**Choice**
Ordered by Distance	74.0^	86.0	90.5^	62.7
Ordered by Academic Quality	73.0	86.0	89.5	67.3^

Note: Cells highlighted in blue with the caret (^) meet the study's threshold for statistical confidence that the strategy is better than the other(s) tested. Understanding, Ease of Use, and Satisfaction were measured on a 0-100 scale. Choice was measured by examining the average academic performance of parents' top-ranked schools on a 0-100 proficiency scale.

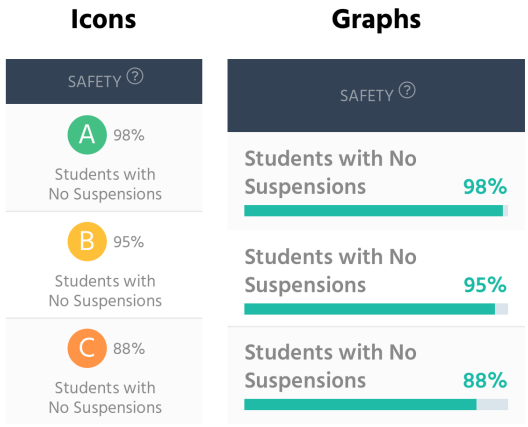
Parents' understanding, ease of use, and satisfaction differed across individual display strategies by 0.5 to 3.0 points on the 0-100 point-scales (see Tables 1-3). The effect of individual strategies on the academic quality of the schools parents chose was up to 5 points on a 0-100 proficiency scale. However, information providers make many presentation decisions and these can add up. One combination of strategies for visual representation, amount, and order of information led parents to choose schools with proficiency rates 20 points higher than another combination tested.

Other key insights from this study

- ***How information is displayed can lead parents to choose different types of schools.*** Ordering schools by academics encouraged parents to select schools with higher academic quality. More generally, parents seemed to choose based on what was displayed most prominently. For instance, when more physical space in the display was dedicated to information about resources (e.g., laptops, arts programs, etc.), parents gave more weight to resources when picking schools. Similarly, when icons visually highlighted differences between schools that were less obvious when looking at only numbers or numbers and graphs (see example), parents gave more weight to the highlighted information when making decisions. Information providers' should be aware that how information is ordered, how much is offered, and how it is visually represented can all influence parents' choices.

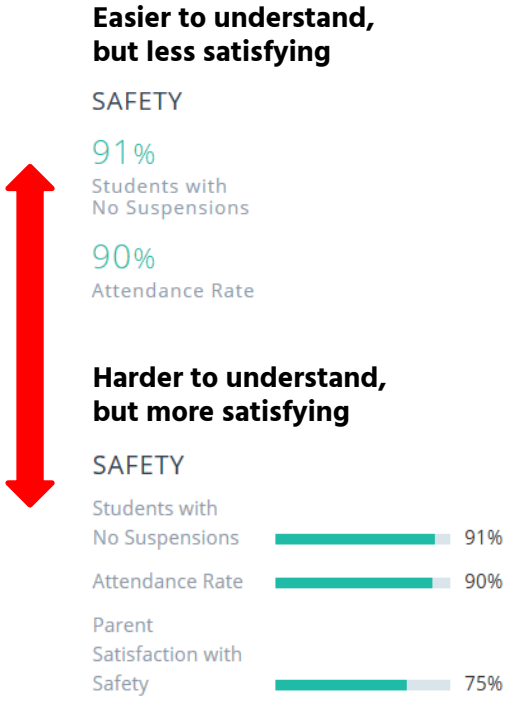
Exhibit 1. Format example: School differences highlighted by icons versus graphs

In the display shown here the icons and the graphs provide the same statistics for school safety but parents shown icons chose schools with better safety, compared to parents shown graphs.



- ***Decisions about how to present information may require trade-offs.*** Including graphs and parents' ratings of schools was more satisfying to parents, but made the information display harder to understand (see below). Displays that encouraged parents to select schools with higher academic quality, made the information harder to understand and less satisfying. Information providers need to acknowledge that there can be trade-offs and decide which outcomes are most important.

Exhibit 2. Format example: Advantages can differ for icons versus graphs



- ***All of the study's school information displays — with their simple layout that included a glossary, a map, and information presented so that it was easy to compare schools — were understandable, easy to use, and satisfying to most parents.*** Regardless of which variation of the information display parents saw, most understood the information and found the display easy to use and satisfying. Information providers may want to consider adopting similarly simple layouts that facilitate comparison across schools.

Looking ahead

This guide illustrates the importance of carefully considering how school information is presented. It is important to see how different information strategies affect parents in the process of actually selecting schools for their children versus those considering hypothetical choices. Also, there is more to learn. For example, what achievement information (average student proficiency, student growth) do parents understand best and use? Are some icons easier to use than others? Future studies should continue to build evidence so information providers have the tools to help parents make the best choices possible.

[1] Haxton and Neild (2012); Stein and Nagro (2015); and Stewart and Wolf (2014) have documented the challenges that school choice information can pose for families with low income, low education levels, or limited English.

[2] Glazerman and Dotter (2017); Harris and Larsen (2015); Hastings, Kane, and Staiger (2009); Schneider, Teske, and Marschall (2002); Stewart and Wolf (2014).

[3] Hibbard et al. (2002), Borgmeier and Westenhoefer (2009), Jones and Richardson (2007), and Jacobsen et al. (2014).

[4] Glazerman (2017).

The Institute for Education Sciences develops snapshots to offer short summaries of evaluation reports. For the full guide and technical appendix, see https://ies.ed.gov/ncee/pubs/20194003.

Glazerman, Steven, Ira Nichols-Barrer, Jon Valant, and Alyson Burnett (2018). Presenting School Choice Information to Parents: An Evidence-Based Guide (NCEE 2019-4003). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.