

Presenting Performance Information and Perceived School Quality: Evidence from a Survey Experiment

¹Peter Bergman

¹Teachers College, Columbia University; ²GreatSchools

Introduction

Improved information has been shown to increase product quality in a number of settings, including education. In the education setting, school districts present information on school quality in a variety of ways. For instance, the largest school district in the country, New York City, rates school performance along an A-F scale. Los Angeles, the second largest school district in the country, uses California's Academic Performance Index, which rates performance on a scale that ranges from 200 to 1,000. Finally, the third largest district, Chicago, uses a 1-3 point scale for their overall school ratings. Little is known about how this variation in presentation affects perceptions of quality. This paper analyzes data from a survey experiment conducted in May 2012 to show how the presentation of school-quality information affects the perceived quality of a school.

Experimental Design

The sample frame consists of 975 registered GreatSchools users and 509 users drawn from Survey Monkey participants. In varying order, respondents are shown four presentations of a hypothetical school's information (see Figures 1 through 4). All content of this presentation is held constant except for the design of the school's performance rating. Specifically, Figure 1 rates the hypothetical school, "Lincoln High School," as a B. Figure 2 rates the school as an 8 out of 10, Figure 3 rates the school as a 4 out of 5, and Figure 4 presents the rating as a B with an indicator for a separate local rating as well. This paper analyzes results based on the first three figures. For each figure participants are asked, "What is your impression of this school's quality based on the rating provided?" Participants can respond on a four-point scale ranging from low quality to high quality.

Data

Participants self-report several background characteristics via the survey. These characteristics include education and income levels, gender, age, and grade level of the participant's child. Other questions delve into the ratings, such as perceived data sources for the ratings.

Results

Figure 5 shows the distribution of perceived quality (4 being the highest perceived quality and 1 being the lowest) for each presentation of the school's rating information. Focusing on the numeric ratings in upper right corner and lower left corner, the distributions are shifted right relative to the A-F scale (upper right corner), with greater mass on the 3 and 4 ratings.

To analyze this numerically, I estimate an ordered-Probit model and report the average marginal effects of seeing a numeric rating versus the A-F rating on perceived quality. The results are as follows. Comparing the effect of a B rating to a 4

out of 5, the latter increases the probability of receiving a 3 or 4 perceived-quality score by 4 and 2 percentage points, respectively. These increases translate into a 6% and 30% increase the likelihood of receiving a 3 or 4 quality score, respectively. Comparing the effect of a B rating to an 8 out of 10, the latter increases the probability of receiving a 3 or 4 perceived quality score by 9 and 8 percentage points, respectively. These increases translate into a 15% increase in the likelihood of receiving a 3 quality score and an 87% increase the likelihood of receiving a 4 quality score. The larger difference for the 1-10 scale versus the A-F scale implies that, when comparing receiving a 4 out of 5 to receiving an 8 out of 10, the latter will be perceived as higher quality. This is the case: presenting information as an 8 out of 10 instead of a 4 out of 5 increases the likelihood of receiving a 3 or 4 perceived quality score by 4 and 6 percentage points respectively. These likelihoods convert to a 6% and 51% increase in the likelihood of receiving a 3 or 4 score.

One potential explanation for a 4 out of 5 rating being perceived as higher quality than a B rating is that the perception of data used to generate the rating differs. This broadly does not appear to be the case—there is no correlation the presentation of the rating and whether participants believe test scores, parent reviews, quality of school life, college acceptance rates, teacher quality, and student improvement rates were used to generate the rating. However, participants were more likely to say they do not know what data was used to formulate the rating if it is presented as a 4 out of 5. The latter is not true for the 8 out of 10 rating however, which suggests not knowing the data source does not drive the differing perception of school quality between a numeric rating and an A-F rating.

A second potential explanation is that people interpret the A-F grading scale in a non-linear way due to grade inflation, such that a B grade is worth less than 4 out of 5. Unfortunately this hypothesis cannot be tested with the data available.

Generally, there is little heterogeneity in the effects. Gender, education level, age, and grade level of a participant's child do not strongly affect the results. One exception is that participants in the lowest-income bracket—those making less than \$25,000 per year—show the *opposite* result. That is, they believe a 4 out of 5 is perceived as a *lower*-quality school than one that receives a B. Though the results are highly statistically significant, there are only 64 participants whose income falls into this low category.

Conclusions

There are several important implications for these results. First, how school performance information is presented affects perceptions of school quality. All else constant, a school rated B is perceived as worse in quality than a school rated as a 4 out of 5. This result implies minor changes in how performance information is presented could affect the demand for high-quality schools. Families may be more willing to go out of their way to send their child to a school rated a 4 out of 5 as compared to a school rated as a B. Further research could investigate what drives these differing perceptions as well as investigating how the presentation of rating information affects the demand for school quality in the context of school choice. The effects of other aspects of presentation could be tested as well, such as the complexity and amount of information.

Figure 1



GreatSchools Rating
On an A-F scale

Lincoln High School

Public | 9-12
2,113 students
Phone: (555) 780-1311
Fax: (555) 760-2041
[School website](#)

7802 Jones Street
Milwaukee, WI 56789, Milwaukee County
Milwaukee School District
[Nearby homes for sale](#)

Figure 2



GreatSchools Rating

Lincoln High School

Public | 9-12
2,113 students
Phone: (555) 780-1311
Fax: (555) 760-2041
[School website](#)

7802 Jones Street
Milwaukee, WI 56789, Milwaukee County
Milwaukee School District
[Nearby homes for sale](#)

Figure 3



GreatSchools Rating

Lincoln High School

Public | 9-12
2,113 students
Phone: (555) 780-1311
Fax: (555) 760-2041
[School website](#)

7802 Jones Street
Milwaukee, WI 56789, Milwaukee County
Milwaukee School District
[Nearby homes for sale](#)

Figure 4



Lincoln High School

Public | 9-12
2,113 students
Phone: (555) 780-1311
Fax: (555) 760-2041
[School website](#)

7802 Jones Street
Milwaukee, WI 56789, Milwaukee County
Milwaukee School District
[Nearby homes for sale](#)

GreatSchools Rating
On an A-F scale

Local Rating

-  Higher Performing
-  Lower Performing
-  Lowest Performing

Figure 5

