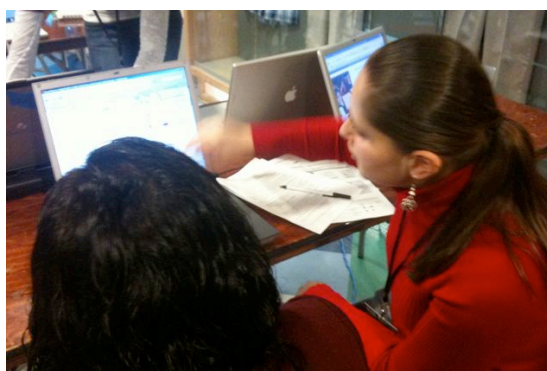
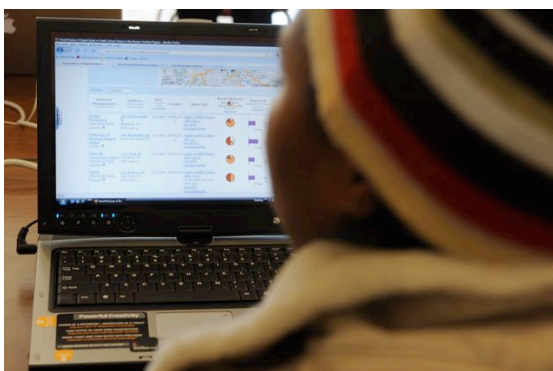
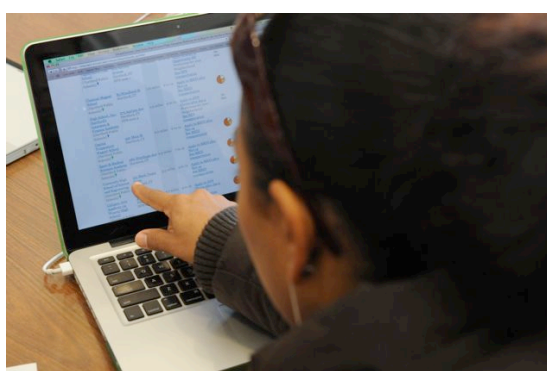


How does Information Influence Parental Choice? The SmartChoices Project in Hartford, Connecticut



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Benjamin Dawson '11, Tehani Guruge '11, and Begaeta Nukic '11

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<http://www.trincoll.edu/depts/educ/css>

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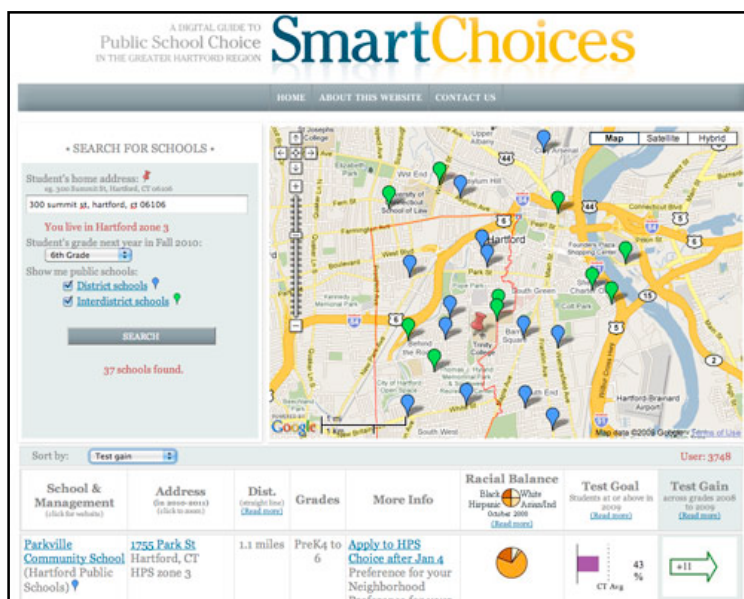
The authors thank Jean-Pierre Haeberly (who designed the SmartChoices search engine), Jesse Wanzer '08 and David Tatem (who provided GIS support), Joel Caron '11, Chris Hunt '11, Rachael Barlow and J. Hughes (who assisted with data analysis), and all of the Trinity students, ConnCAN and Achieve Hartford staff, Janice Flemming and Voices of Women of Color staff, HPS school and RSCO fair staff, and -- most importantly -- the parents and guardians who participated in SmartChoices workshops.

Note about collaboration:

This paper was the product of collaboration between undergraduate students and faculty at Trinity College. Jack Dougherty, Associate Professor of Educational Studies, coordinated the website design, research methods, data collection, and wrote the final draft. Diane Zannoni, Professor of Economics, advised on the research design and supervised the quantitative analysis. Begaeta Nukic '11 (Ed Studies & Mathematics major) trained and organized student researchers, Courteney Coyne '10 (Ed Studies, Hispanic Studies, and International Studies major) transcribed and coded parent interviews, and Maham Chowhan '10, Benjamin Dawson '11, and Tehani Guruge '11 (all Economics majors) conducted the quantitative analysis. Email comments to <jack.dougherty@trincoll.edu>.

Introduction

For the second year of SmartChoices, a new and improved version of the website <<http://SmartChoicesHartford.org>> was launched in November 2009 by the Cities, Suburbs, and Schools Project at Trinity College, ConnCAN, and Achieve Hartford. This parent-friendly, web-based search tool empowers urban and suburban parents in navigating their public school choice options in the Greater Hartford region.



Available in both English and Spanish, SmartChoices covers over 200 public schools and programs in the city of Hartford and 17 suburban towns. When parents type in their child's address and grade level, SmartChoices shows all of their eligible district and interdistrict public schools on a map, with the ability to sort and compare by distance from home, racial balance, and test scores. Additional links take parents directly to individual school websites, application forms, and transportation links. SmartChoices is the only comprehensive website that brings together all of this information for "one-stop shopping."

For 2009-10, SmartChoices implemented several new web design elements, such as a sorting feature for organizing results and improved visual data representations. We also expanded parent outreach efforts with community organizing by the Voices of Women of Color in Hartford. Overall, 3,385 distinct searches were conducted on SmartChoices in the Hartford region from November 2009 thru March 2010, and 77 percent of these searched addresses in the city of Hartford.

Key findings: We also conducted in-depth interviews with 93 parents and guardians who participated in 10 workshops, to better understand how users interact with and are influenced by SmartChoices. The workshop experience led about one-third to change their top-choice school and one-third to clarify their choice, while the remaining third remained unchanged. Among the 32 workshop participants who changed their top-choice school, they tended to select those with greater Test Goal, Test Gain, and Racial Balance (in that order), but also frequently sorted results by Distance. Our conclusion underscores the role that the "digital divide" plays on public school choice in Hartford.

What does the SmartChoices project contribute to the existing literature?

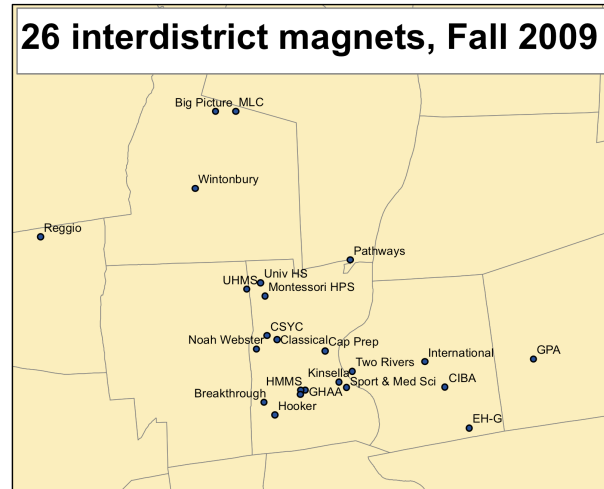
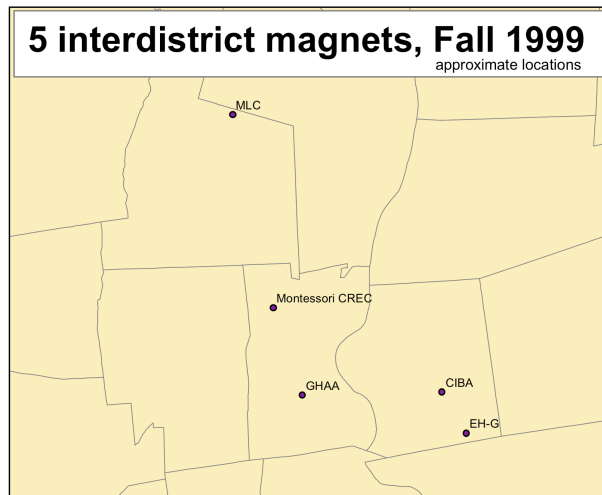
Chris Lubienski (2008) thoughtfully challenges the underlying premise that school choice enhances parental empowerment by asking whether quality information about educational options is widely and equitably distributed. In his survey of forty school rating websites, he found that most focused on simplistic inputs and outputs, with little insight on the educational processes inside schools. While most websites offered test scores, Lubienski found very few that distinguished the school's effectiveness from other demographic variables, such as value-added assessments of individual students over time. SmartChoices does not address all of Lubienski's criticisms of weak parent information systems. But our website does introduce a very simple value-added variable (called Test Gain) into the vocabulary of Hartford-area parents, which offers a better glimpse into school learning processes than average school test scores, the most common quality indicator distributed by the Connecticut Department of Education.

The idea of tracking website statistics to better understand parental decision-making on school choice was inspired by Jack Buckley and Mark Schneider's (2007) innovative work from 1999 to 2003 with the DCSchoolSearch.com website, which researchers set up and monitored for District of Columbia residents to read about traditional public and charter schools. In addition to the "digital divide" finding that college-educated users were more likely to visit the website, Buckley and Schneider also learned that parents sought higher-performing schools with lower percentages of black students. While the SmartChoices website is not designed in the same manner as the original DCSchoolSearch.com site, our study also tracks the sorting frequency and relative influence of racial balance on parental decision-making.

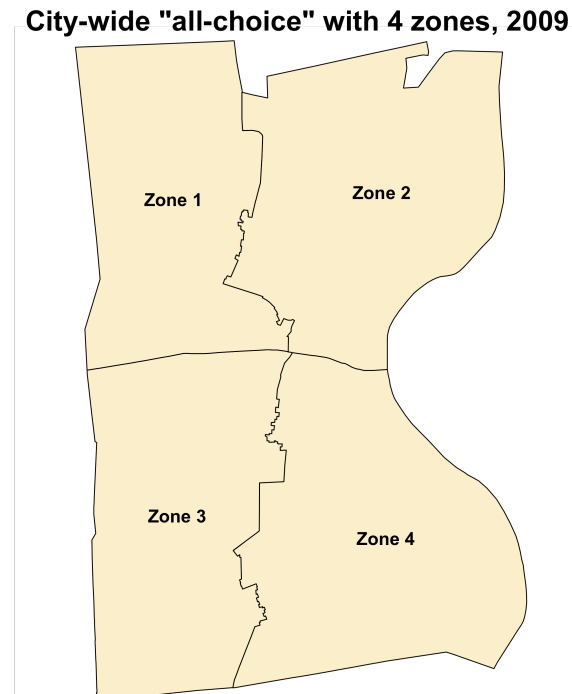
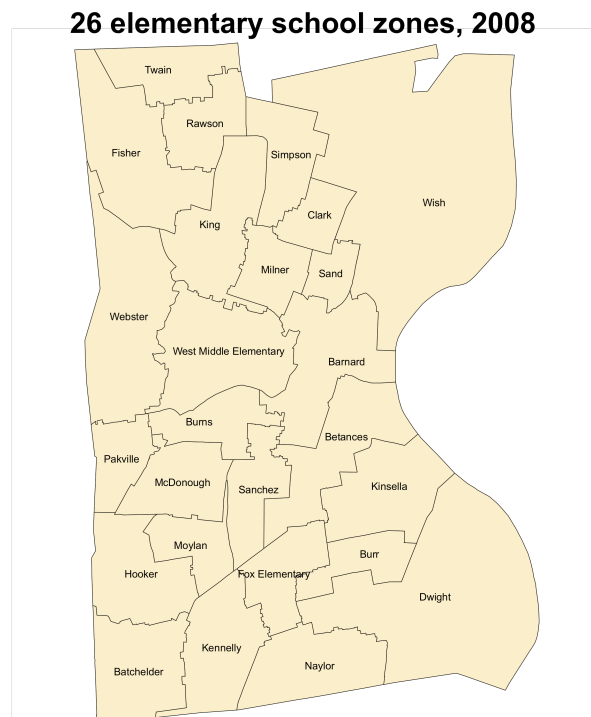
Our website's address-specific search and data-sorting features allows us to contribute to the growing literature on how information influences parental choice. A related study by Hastings and Weinstein (2008) in Charlotte-Mecklenberg, North Carolina found that low-income parents who received school data (in the form of a paper list of schools ranked by test score) were more likely to choose higher-performing schools than a control group (which received an alphabetical paper list, without test data). Our study takes this concept one step further. We designed the SmartChoices website to randomly sort users' initial results according to one of five different categories (School Name, Distance, Racial Balance, Test Goal, and Test Gain), and tracked how frequently users resorted the data by each of these variables. We were particularly interested in measuring the influence of school data sorted by Distance versus Test data, since Hastings and Weinstein recognized this parental trade-off but had no feasible way to isolate it using mass-produced paper forms. By contrast, the SmartChoices website provides parents with more personalized data, using the Google Maps interface to map their home address and calculate the distance to all eligible school choices. Furthermore, the SmartChoices website also allows us to distinguish whether parents are more influenced by average school achievement level (Test Goal) or a basic value-added achievement indicator (Test Gain).

Why did we create SmartChoices?

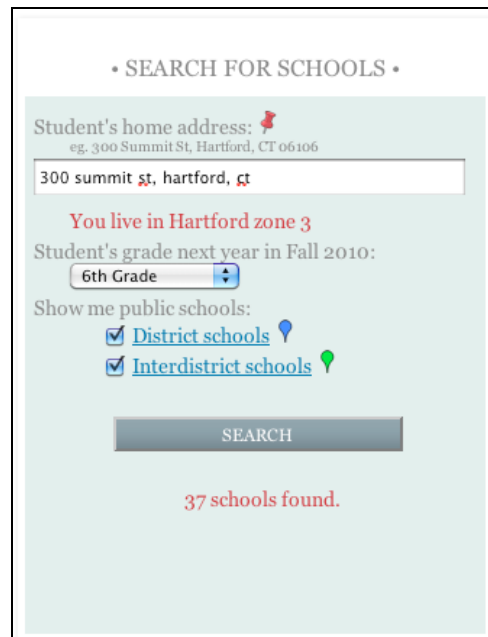
From a Hartford parent's perspective, the number of school options has grown dramatically over the past several years, for two reasons. First, the number of interdistrict magnet schools has increased from 5 to 26 over the past ten years, as part of the voluntary school desegregation remedy under the *Sheff v O'Neill* litigation. The number of interdistrict choices rises further when including the charter, technical and vocational-agricultural schools, and also the Open Choice city-suburban district transfer program.



Second, Hartford implemented its “all-choice” system in 2009, shifting from 26 elementary attendance areas to a citywide model with preferences in 4 zones.



Combining these two factors, a typical Hartford 6th grader is now eligible to apply to 37 public schools, as shown by this SmartChoices screenshot.



A screenshot of the SmartChoices website's search results page. The page has a light blue background. At the top, it says "• SEARCH FOR SCHOOLS •". Below this, there's a section for "Student's home address:" with a red pin icon and the example "eg. 300 Summit St, Hartford, CT 06106". A text input field contains "300 summit st, hartford, ct". Below the address, it says "You live in Hartford zone 3". Then, "Student's grade next year in Fall 2010:" is followed by a dropdown menu showing "6th Grade". Under "Show me public schools:", there are two checked checkboxes: "District schools" with a blue pin icon and "Interdistrict schools" with a green pin icon. A grey "SEARCH" button is below these. At the bottom, it says "37 schools found." in red text.

Additionally, from the parent's perspective, there is more than one application process, due to multiple school choice providers, each with their own forms and deadlines. The two largest choice providers are the Regional School Choice Office (RSCO) and the Hartford Public Schools Choice Office (HPS). Last year, parents applied on the same schedule, but this year the two adopted different schedules:

- RSCO applications (on-line or paper) from late November to February 11th
- HPS applications (on-line only) from January 4th to March 30th

While RSCO handles most interdistrict choice applications, there also are a handful of other interdistrict magnets (CIBA, Big Picture, Wintonbury) and charter schools (Jumoke, Odyssey) that operate with an independent application process. For each child, a typical Hartford parent can potentially submit one RSCO application (listing 5 choices), one HPS application (listing 4 choices), and separate applications for other individual schools listed above. Having a larger family with several children makes the process even more complicated.

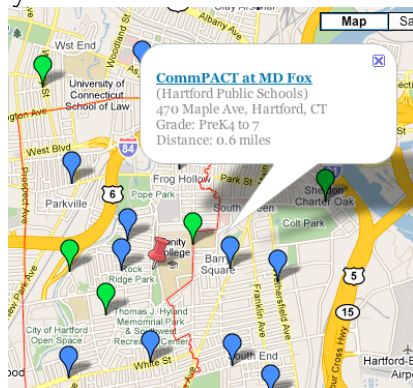
SmartChoices is the only user-friendly site for Hartford-area parents to see all of their children's eligible public school choices on one screen, make data-based comparisons between them, and follow links to the appropriate application process.

Given that public school choice opportunities were expanding rapidly for Hartford-area parents, amid broader policy debates about parental access to information and the efficacy of choice in reform efforts, the Cities, Suburbs, and Schools Project decided to design the SmartChoices website and study its influence on parental decision-making. Hughes (2009) describes several of the first-year design decisions behind SmartChoices.

What are the sources for school data that appear on SmartChoices?

In addition to links to individual school websites, application, and transportation information, SmartChoices includes four key variables that users may sort as desired:

DISTANCE: In addition to the map, we calculate a "straight line" distance between two points (the school's street address and the home address), using their latitude and longitude coordinates, to offer parents a simple and uniform system of measurement. Our method is not the same as walking or driving distance, nor bus routes, which all follow longer pathways.



RACIAL BALANCE: We obtained the most recent available school racial data from the Connecticut State Department of Education (CSDE). Our goal was to represent this data as an easy-to-read pie chart. Data values were omitted from the chart to reduce clutter. We combined Asian and Native American percentages into one category to formulate a 4-color chart, as these were usually the two smallest groups. When sorting by Racial Balance, SmartChoices lists the school that is closest to having a 50/50 White-Minority student enrollment at the top, then others in descending order. This indicator should not be confused with the 2008 Sheff desegregation standard, which defines a "reduced-isolation" school as not exceeding 75% students of color. Racial data may be unavailable if a new school opened in Fall 2009, or is scheduled to open in Fall 2010, or was not reported by CSDE. For Open Choice, racial data is based on the average of Hartford and the 28 participating district total enrollments (not individual students or schools in the Open Choice program).



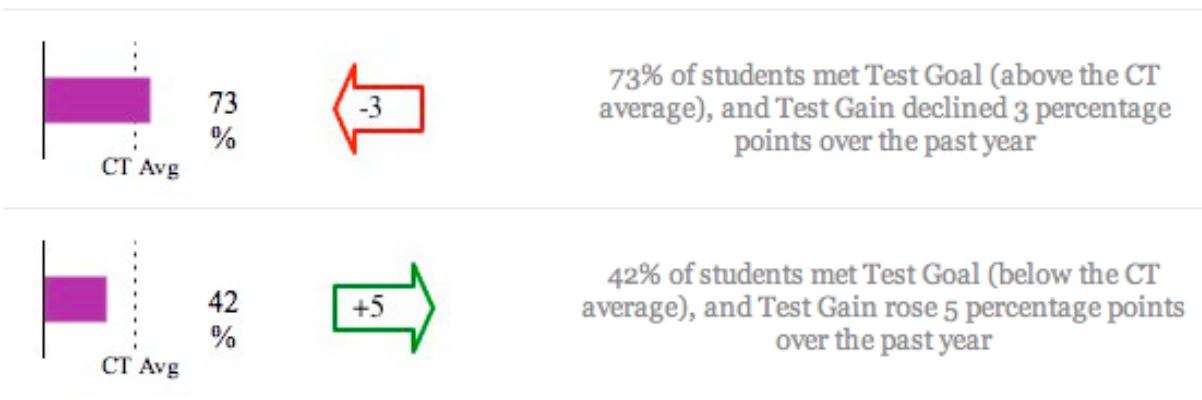
TEST GOAL and TEST GAIN: All test score data on this site was compiled from two sources: the Connecticut Mastery Test (CMT) for grades 3 to 8, and the Connecticut Academic Performance Test (CAPT) for grade 10, which are both available at <http://www.ctreports.com>. For each grade level, we averaged the percentage of

students who scored at or above goal level across different tests: read, writing, mathematics (and science, for grades 5, 8, and 10).

Test Goal shows the percentage of students scoring at/above goal for the final grade level in each school. For example, if a school includes grades PreK-6, then the 6th grade scores were used for our Test Goal calculation. In each bar chart, a dashed line represents the average Connecticut score, which in 2009 was approximately 65% (for the CMT) and 48% (for the CAPT).

Test Gain shows the percentage point difference in scores over the past year. We averaged the change between 3rd grade students in 2008 and 4th grade students in 2009, and between 4th grade students in 2008 and 5th grade students in 2009, and so forth using all CMT scores available for each school. A positive sign (green arrow) shows a percentage point increase over one year, while a negative sign (red arrow) shows a decrease. A zero symbol means no change. Test Gain is similar, but not identical to, ConnCAN's methodology for calculating "performance gain." Read more at <http://www.conncan.org/learn/reportcards/about>.

HOW TO READ TEST GOAL AND TEST GAIN FIGURES



Neither Test Goal nor Test Gain is a perfect measure of school quality. For instance, a school may have a high Test Goal because it enrolled students who already scored well on standardized tests, regardless of the quality of instruction. Test Gain offers a better way to compare the relative gains of students in different schools, but it also has limitations. First, Test Gain assumes continuity in school's student population from year to year, while in practice, last year's cohort of 3rd grade students is not identical to this year's cohort of 4th grade students. Higher rates of student mobility reduce the effectiveness of this measure. Second, small differences between how CMT cut-off scores are measured between years may affect the percentages of students at goal each year. Finally, while Test Gain resembles a value-added indicator, our simple formulation should not be used to attribute all gains or losses solely to the school.

Nevertheless, given the constraints of publicly available test score data in Connecticut, we disseminate both Test Goal and Test Gain because together, they offer the best parent-friendly indicators to judge the relative merits of student achievement across public schools.

How does SmartChoices work? Where can I obtain the free source code?

In Fall 2008, our design team created SmartChoices according to leading Web 2.0 design principles, based on programming by Jean-Pierre Haeberly, Director of Academic Computing at Trinity College. We updated the site's features in Fall 2009. SmartChoices exists on a three-tier server architecture, which integrates the web server (search page & interactive Google map) with the application and database servers. Asynchronous requests are what permit the user to initiate a search and view the results without having to reload the page, as in a traditional form-based website.

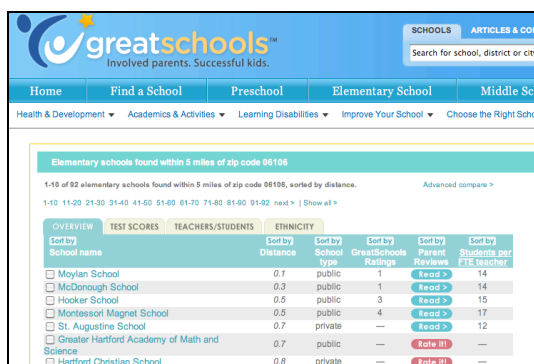
To encourage other regions to create similar websites, we are distributing SmartChoices code as free, open-source software upon request <smartchoices@trincoll.edu>.

Recipients assume all responsibility for implementing and modifying the code to suit their local needs, as SmartChoices does not offer free technical support. Our team also compiled and/or digitized school attendance boundaries for Hartford and surrounding suburban districts. The GIS shapefiles and KML files of these boundaries are being made publicly available through MAGIC, the Map and Geographic Information Center at the University of Connecticut <<http://magic.lib.uconn.edu>>.

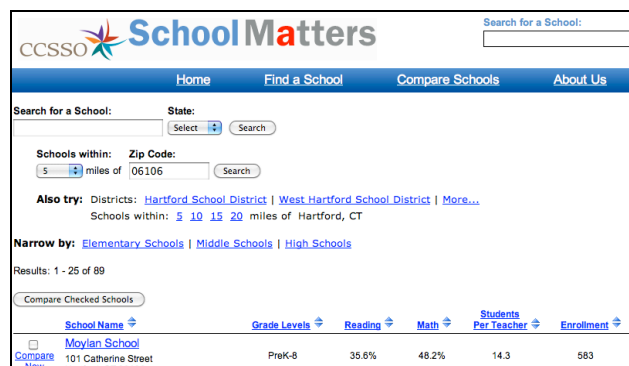
How does SmartChoices differ from other school rating websites?

Although there are numerous school search sites on the web, SmartChoices stands apart from the others by offering address-specific listings of all public schools for which a family is eligible to apply, with easy-to-read comparative data to distinguish between them.

By contrast, nationally popular ratings websites allow users to search for schools located near a zip code, but these results do not match the set of eligible public school choices. For example, if a Hartford parent searches GreatSchools.net or SchoolMatters.com for schools located within 5 miles of the 06106 zip code, she will see a list of about 90 public and private schools in the vicinity, as of April 2010. But neither of these websites clarifies which district or interdistrict schools the child is eligible to attend, nor information about the application processes, nor working links to many of the school or district websites.



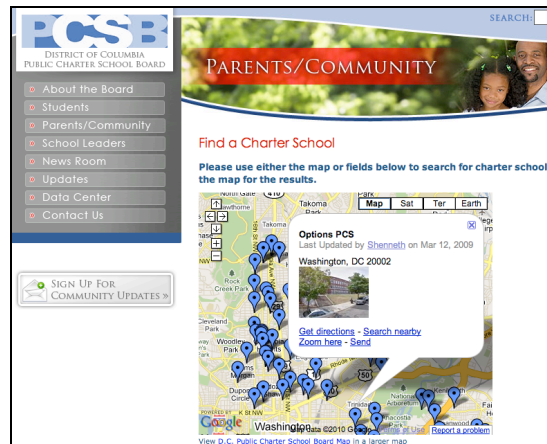
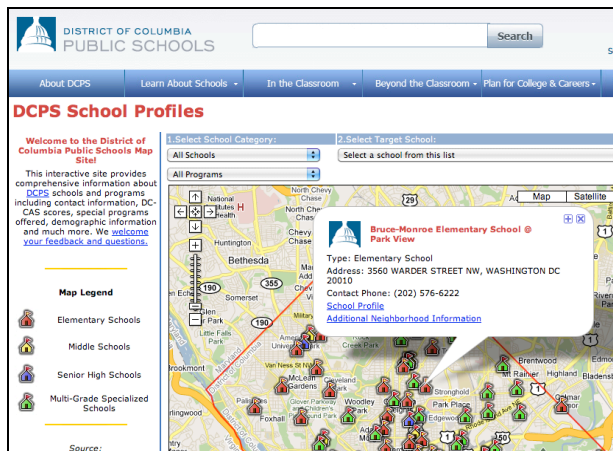
School name	Distance	School type	GreatSchools Rating	Parent Reviews	Students per FTE teacher
☐ Moylan School	0.1	public	1	Read > 14	
☐ McDonough School	0.3	public	1	Read > 14	
☐ Hooker School	0.5	public	3	Read > 15	
☐ Montessori Magnet School	0.5	public	4	Read > 17	
☐ St. Augustine School	0.7	private	—	Read > 12	
☐ Greater Hartford Academy of Math and Science	0.7	public	—	Rate It!	
☐ Hartford Christian School	0.8	private	—	Rate It!	



School Name	Grade Levels	Reading	Math	Students Per Teacher	Enrollment
☐ Moylan School	PreK-8	35.6%	48.2%	14.3	583

In the District of Columbia, there are two different map-based public school search websites, as of April 2010. One is operated by the District of Columbia Public Schools (DCPS) for district-run schools (<http://dcAtlas.dcgis.dc.gov/schoolprofile>), and the other is operated by the District of Columbia Public Charter School Board (PCSB)

(<http://www.dcpubliccharter.com/SearchSchools.aspx>). But neither site offers a truly comprehensive list of all the public school choices available to parents, since they are owned by competing providers. Furthermore, neither website shows easy side-by-side school data comparisons, and users must “drill down” to see individual pages of student achievement and racial balance data.



The State of California operates CA School Finder (<http://www.schoolfinder.ca.gov>), a comprehensive tool that allows parents to search for public schools by proximity to home address, and sort and compare results by data categories. However, the site does not automatically narrow schools to a student’s eligible choices, nor does it offer a Spanish-language interface.



How was SmartChoices disseminated to the public?

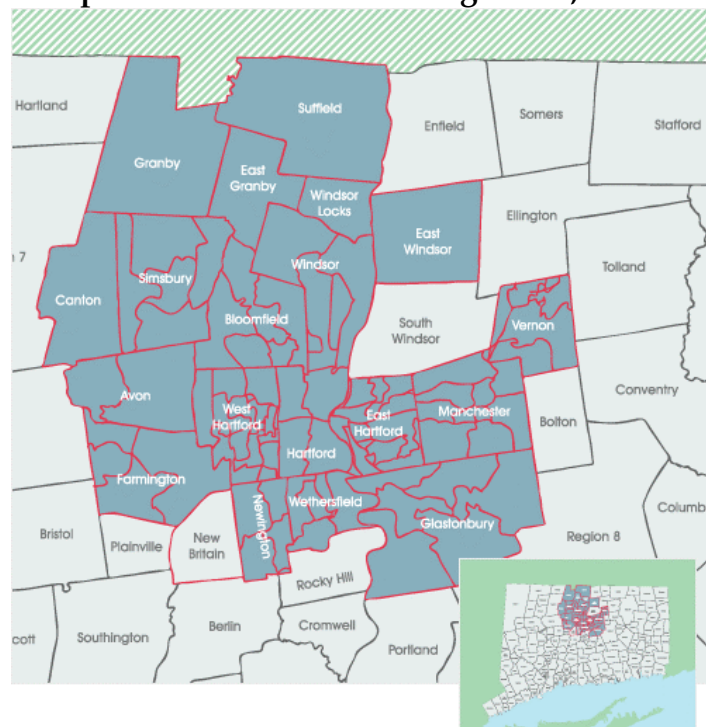
In addition to the parent research workshops described below, ConnCAN and Achieve Hartford contracted with the Voices of Women of Color to provide community outreach and guide parents through the SmartChoices website and school application processes. VOWOC, led by Hartford community organizers, took the initiative on arranging hands-on sessions with laptop computers and portable internet devices in various neighborhoods across the city, and also providing support for parents submitting on-line applications at public sessions hosted by the Hartford Public Library. Moreover, VOWOC innovated by launching a series of school choice “house parties,” where women invited friends into their living rooms to learn about the choice process. The organizers also arranged for a local public access cable television station to film a “house party” information session and broadcast it for viewers elsewhere in the city. Furthermore, Achieve Hartford media consultants arranged for a network television affiliate to broadcast a short feature about SmartChoices on several local news broadcasts.

How are SmartChoices web statistics collected and reported?

For our 2nd year of SmartChoices, we collected website statistics for a 5-month period from November 2009 through March 2010, designed to track our partnership's outreach efforts during the overlapping RSCO and HPS application periods. On the home page, in both English and Spanish, each user is offered a brief statement of informed consent, requesting permission for us to anonymously track data before entering the search page, in accordance with Trinity's Institutional Review Board for ethical research involving human subjects. While we do not track names, all data entered into the search engine (such as home addresses and web clicks) are stored on a secure server and reported here in aggregated form, to maintain individual-level confidentiality.

All statistics below are based on searches conducted for street addresses located inside the Greater Hartford region. Many users intentionally or accidentally attempted searches far outside of Connecticut, and we excluded those from this report. For this study, we defined "the Hartford region" as the rectangle between coordinates 41.5 and 42.5 degrees North, and between 72 and 73 degrees West, to designate a central Connecticut geographical area within a reasonable transportation distance for interdistrict school choices in or near the city of Hartford. This rectangle is slightly larger than the SmartChoices coverage area of digitized school attendance zones for the city of Hartford and 17 suburban towns. Therefore, some results are reported as "Outside area," meaning that they were within central Connecticut, but outside the SmartChoices coverage area (such as New Britain, South Windsor, etc.). Furthermore, for this report we omitted all searches conducted for the sample address given on the website (300 Summit St, Hartford CT, the location of Trinity College), which we frequently used for testing, training, and public demonstrations.

Map of SmartChoices Coverage Area, 2009-10



How many people used SmartChoices during year 2?

There are two ways of counting web statistics for the SmartChoices site, based on how the search engine collects address data from users. Overall, **3,385 distinct searches** were conducted on SmartChoices in the Hartford region during this 5-month period. A distinct search is defined as a web search session for a specific address on a given date, meaning that all records for “100 Main St” on January 1st count as one distinct search. Given that the Google Maps search engine does not distinguish between “Apartment 1” and “Apartment 2” at the same street address, and Hartford has a high proportion of multi-family dwellings, we prefer this method for calculating usage in urbanized areas.

Since the distinct search method includes repeat visitors to the website (meaning that “100 Main St” on January 1st and February 1st is counted twice), we also provide a more conservative statistic for comparative purposes. In its second year, **2,209 unique street addresses** in the Hartford region were searched on SmartChoices. This figure separates out the so-called repeat addresses, but does not adequately distinguish between two residents in the same apartment building with the same street address. Since the unique street address count ignores the reality of multi-family dwellings, the remainder of this report will refer to “distinct searches” unless otherwise noted.

Table 1: Unique and Repeat Addresses Searched, by general location, Nov 2009 thru March 2010

Street Address	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal	Suburban towns	Outside area	TOTAL
Unique	324	272	580	437	1613	419	177	2209
Repeat	214	145	351	269	979	149	48	1176
Total Searches	538	417	931	706	2592	568	225	3385

We recently introduced Google Analytics web tracking to explore additional ways of measuring web traffic next year. We learned that many people visit SmartChoices from far outside our coverage area. During a March 2010 test period, we tracked visitors from New Haven, Boston, New York, and the United Kingdom who spent significant time on our website. Perhaps some are exploring SmartChoices to compare what our site offers in comparison to others.

Excerpt from Google Analytics test report for portion of March 2010



In what areas were SmartChoices searches conducted?

During the five-month period, 77 percent of all distinct searches were conducted for addresses in the city of Hartford, while the remainder searched for suburban towns and addresses outside of the coverage area.

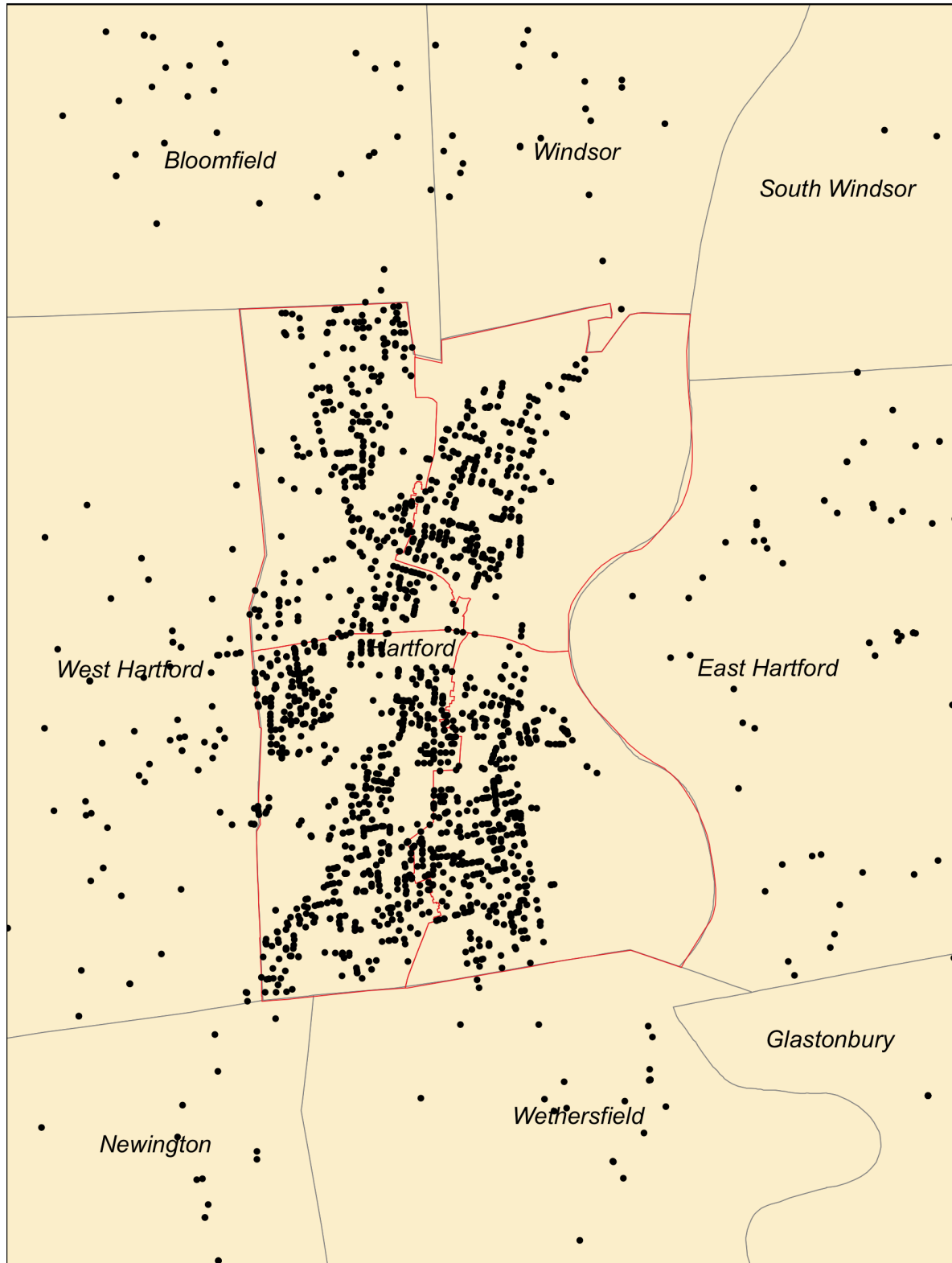
Table 2: General location of distinct searches on SmartChoices, by month								
Month	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal	Suburban towns	Outside area	TOTAL
November	27	20	139	132	318	94	19	431
December	57	17	73	69	216	57	17	290
January	232	191	233	218	874	182	75	1131
February	104	80	203	151	538	161	79	778
March	118	109	283	136	646	74	35	755
5-month total	538	417	931	706	2592	568	225	3385
Percent of total					77%	17%	7%	100%

Looking more closely at the 2,592 distinct searches in Hartford only, the majority searched for addresses in the city's South End (36% in HPS Zone 3, and 27% in HPS Zone 4). Due to the absence of current census data (to be available in April 2011), we cannot compare the proportion of households with school-age children that used SmartChoices in different parts of the city.

Table 3: Percent of zone, Hartford-only distinct searches, by month					
Month	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal
November	8%	6%	44%	42%	100%
December	26%	8%	34%	32%	100%
January	27%	22%	27%	25%	100%
February	19%	15%	38%	28%	100%
March	18%	17%	44%	21%	100%
5-month total	21%	16%	36%	27%	100%

The dot distribution map on the next page illustrates the extent of SmartChoices usage across the city of Hartford and nearby suburbs. Note that each dot indicates the geographical coordinates of the address entered into the search engine, as processed by the built-in Google Maps tool. Two users who entered the same address (such as 100 Main Street, Apartment 1 and Apartment 2) are represented by the same dot. Furthermore, if a user only entered a town name or zip code, Google Maps usually returns the geocoordinates of the center of the town or zip code area. Finally, the dots show only the location of the address searched, which is not the same as the physical location where the user accessed a computer.

SmartChoices distinct searches Year 2 (Nov 2009 - March 2010)



What did users search for during year 2, and in what language?

During the five-month period, users conducted grade-level searches for children entering Kindergarten (16 percent) and 9th grade (14 percent) most often. This corresponds to the most common grade-level entry points in a system where K-8 schools are increasingly becoming the norm.

Table 4: Grade Level of Distinct Searches, by general location, Nov 2009 thru March 2010

Grade searched	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal	Suburban towns	Outside area	TOTAL	Percent Total
PreK 3	58	22	64	31	175	61	22	258	8%
PreK 4	30	32	29	26	117	35	10	162	5%
K	109	62	144	124	439	87	20	546	16%
1st Grade	39	28	109	39	215	31	14	260	8%
2nd Grade	30	22	46	29	127	37	8	172	5%
3rd Grade	29	23	51	32	135	24	8	167	5%
4th Grade	32	22	48	62	164	29	9	202	6%
5th Grade	41	37	53	73	204	30	7	241	7%
6th Grade	32	23	49	66	170	48	40	258	8%
7th Grade	14	21	98	24	157	32	7	196	6%
8th Grade	32	24	52	26	134	17	12	163	5%
9th Grade	44	50	119	112	325	99	43	467	14%
10th Grade	22	24	35	31	112	18	15	145	4%
11th Grade	12	19	24	25	80	8	7	95	3%
12th Grade	14	8	10	6	38	12	3	53	2%
TOTAL	538	417	931	706	2592	568	225	3385	100%

The vast majority of SmartChoices users (98 percent) searched the site using the default English language setting. Nearly all of the users who selected “Español” conducted searches in the predominantly Spanish-speaking South End neighborhoods of Hartford. Based on our experience with parent workshops, many Spanish-speakers may be accepting the English-language default setting as the norm for interacting with the public school system, regardless of their own level of proficiency or comfort with English. Also, based on new information from Google Analytics regarding the relatively small size of computer screens of some users (800 x 600 pixels or less), it is possible that some users may not see the “Español” button in the upper-right corner of the screen.

Table 5: Website language selected for distinct searches, by general location, Nov 2009 thru March 2010

Language selected	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal	Suburban towns	Outside area	TOTAL	Percent Total
English	538	412	907	685	2542	562	225	3329	98%
Spanish		5	24	21	50	6		56	2%
Total	538	417	931	706	2592	568	225	3385	100%

When did users search SmartChoices?

During the early months of November and December 2009, SmartChoices activity corresponded with scheduled parent workshops, where Trinity students introduced the site to as many as 75 people during a single session. Beginning in January 2010, web activity climbed to over 200 searches per week, on average, as a result of extensive community outreach by ConnCAN, Voices of Women of Color, and Achieve Hartford. The most intensive level of activity was February 10-11th, when the local NBC 30 television station featured SmartChoices in several of its newscasts and the RSCO application deadline was ending.

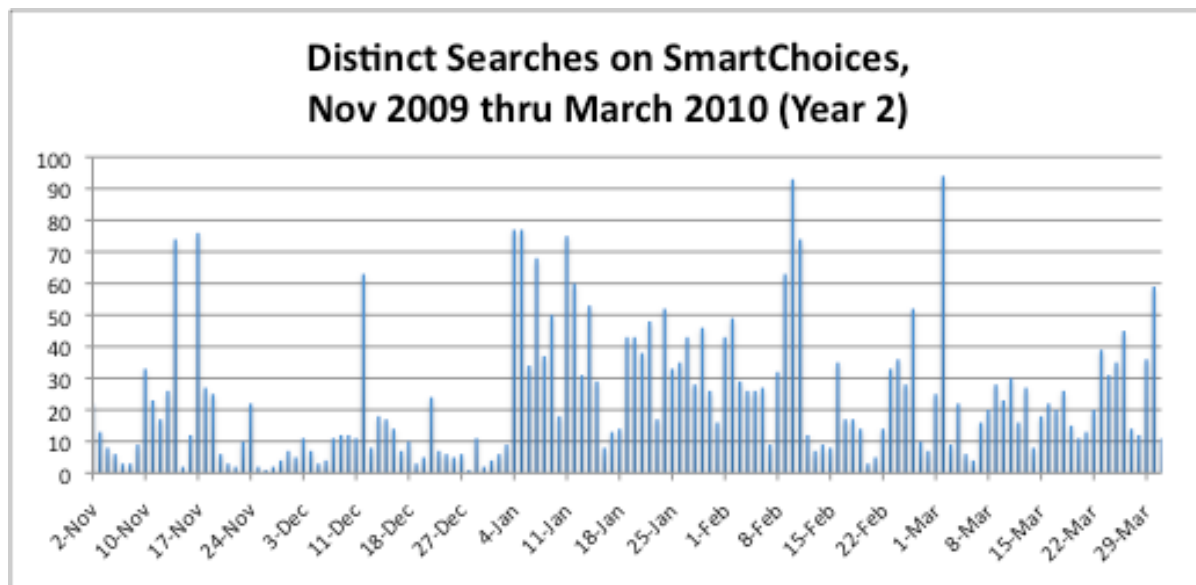


Table 6: Week-to-week totals of distinct searches on SmartChoices, for Jan-March 2010

Week Ending	HPS zone 1	zone 2	zone 3	zone 4	Hartford s	Suburbs	Outside area	TOTAL
Jan 6th	45	23	44	56	168	26	13	207
Jan 13th	67	71	58	73	269	55	15	339
Jan 20th	45	37	32	27	141	16	3	160
Jan 27th	41	39	54	32	166	68	32	266
Feb 3rd	30	28	72	50	180	34	23	237
Feb 10th	28	26	80	43	177	63	36	276
Feb 17th	18	16	33	22	89	51	22	162
Feb 24th	29	18	31	19	97	16	9	122
Mar 3rd	33	27	86	55	201	19	5	225
Mar 10th	9	13	49	21	92	20	7	119
Mar 17th	25	10	64	28	127	9	5	141
Mar 24th	44	28	35	28	135	17	3	155
Mar 31st	26	35	68	48	177	20	15	212

How do SmartChoices Year 2 web statistics compare those from Year 1?

When we initially created the SmartChoices concept, we developed the original website and pilot tested it during fall 2008, and publicly launched it in early January 2009 for the combined RSCO and HPS application period that ended in mid-February. During this 6-week period, SmartChoices received an early boost of publicity from the *Hartford Courant* and two regional school choice fairs, which propelled our first-day web activity to over 400 searches. But many of these searches were conducted for suburban addresses (39 percent) and those outside our coverage area (12 percent), which combined outweighed those for the city of Hartford (48 percent). Furthermore, after the initial fanfare, our web traffic subsided due to our lack of a systematic community outreach strategy at that time.

Although the two periods and populations of users are not directly comparable, SmartChoices had 1,221 distinct searches in Year 1, and 3,385 in Year 2, with a significant shift in the proportion for the city of Hartford (from 48 to 77 percent).

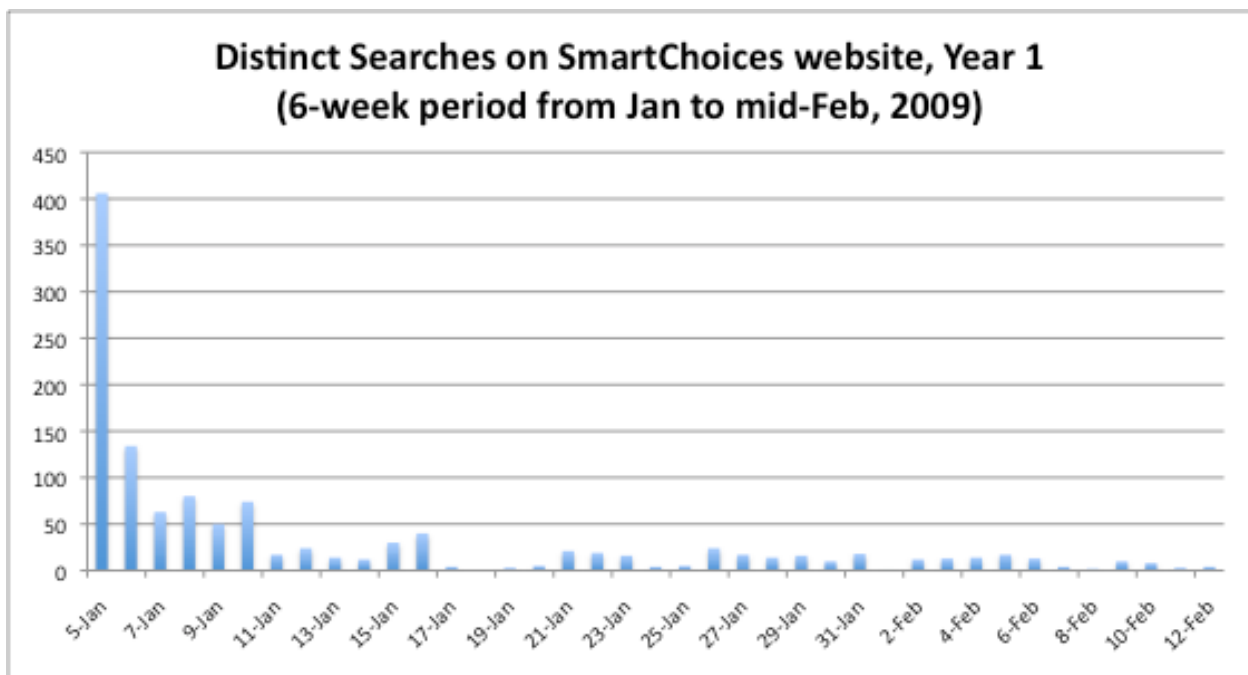


Table 7: Distinct searches on website, by general location, for 6-week period in Year 1

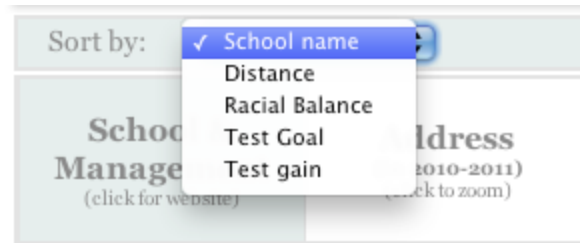
Period	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal	Suburban towns	Outside area	TOTAL
6-week total	94	88	199	206	587	482	152	1221
percent of total					48%	39%	12%	100%

Table 8: Distinct searches, by percent in zone for Hartford only, for six-week Year 1

Period	HPS zone 1	zone 2	zone 3	zone 4	Hartford subtotal
percent of total	16%	15%	34%	35%	100%

How did SmartChoices users sort their results?

In Year 2, we introduced a sorting feature that allowed users to organize their search results in five different columns. In our website statistics, we tracked how often users sorted their data. Furthermore, we randomized how each user's initial results would be sorted according to five categories (school name, distance, racial balance, test goal, and test gain).



First, we observed that a large majority of users did not sort their results (and perhaps did not see the sort button, or understood how it worked). Based on our analysis of the sorting behavior of individual users among all of the distinct searches we tracked, 70 percent of them sorted zero times. Users in suburban towns were slightly more likely to sort results once or several times (35 percent combined). Interestingly, patterns varied widely on sorting behavior, with over 160 users who sorted results 5 times or more. Over three-quarters of these “super sorters” conducted searches for addresses in the city of Hartford.

Table 9: Sorting activity, by percent of users for all distinct searches, after initial random assignment, Year 2

Number of times sorted by user	HPS zone 1		zone 2		zone 3		zone 4		Hartford subtotal		Suburban towns		Outside area		TOTAL	
0	389	(74%)	323	(79%)	595	(68%)	423	(66%)	1730	(71%)	336	(65%)	156	(71%)	2222	(70%)
1	74	(14%)	51	(12%)	149	(17%)	116	(18%)	390	(16%)	98	(19%)	43	(20%)	531	(17%)
2+	62	(12%)	37	(9%)	126	(14%)	99	(16%)	324	(13%)	83	(16%)	21	(10%)	428	(13%)
Total	525	(100%)	411	(100%)	870	(100%)	638	(100%)	2444	(100%)	517	(100%)	220	(100%)	3181	(100%)

Among all of the distinct search users who did sort their results, the most frequently selected categories were “Distance” (25%) and “Test Goal” (24%), with “Test Gain” and “Racial Balance” trailing behind.

Table 10: Sorting categories selected, for all distinct searches after initial random assignment, Year 2

Sorted by:	Total	Percent Total
Distance	499	25%
Test goal	487	24%
Test gain	393	19%
Racial balance	342	17%
School name	308	15%
TOTAL sortings	2029	100%

The SmartChoices Workshop Research Design

For the second year of SmartChoices, one of our major efforts was to design and conduct workshops for urban and suburban parents and guardians, with individual hands-on training on using our website to understand their family's public school options. This effort blended parent outreach and research. Rather than waiting for Hartford parents to find the website, we brought the website into their community and conducted one-on-one training sessions that also included interview questions to better understand their decision-making processes and interaction with the website.

During our initial planning in summer 2009, we designed our workshops to focus on parents of Hartford children at elementary schools ending in Grades 4-5-6-7, for two reasons. First, our research design examined how parents make decisions regarding the five columns of sortable data (school name, distance, racial balance, test goal, and test gain). Since test gain can only be calculated from Grade 3-8 CMT scores (and not Grade 10 CAPT scores), the study sample focused on students enrolling in elementary schools for the next school year. Second, we targeted schools ending in Grades 4-5-6-7 because these were all "mandatory choosers" who were required to select a new elementary school. The Hartford Public Schools openly cooperated with our research project and welcomed us to conduct parent workshops at selected schools. But in early fall, HPS reduced the number of elementary schools with mandatory choosers by adding on grade levels next year (to the benefit of parents). Furthermore, despite several requests, we did not succeed in obtaining cooperation to conduct workshops at two non-HPS elementary magnet schools with significant numbers of mandatory choosers. As a result, in October 2009 we broadened the study sample to include parents of children in Hartford and the suburban area who would be entering elementary school (grades preK-8) in the next academic year.

From November 2009 to January 2010, we conducted workshops and interviewed participants who fit our study sample guidelines at two types of events:

Event type	Interviews	Description
Neighborhood	52 interviews at 7+ events	smaller events, typically drawing between 5-20 parents at a Hartford neighborhood elementary school, neighborhood center, or individual's home
Regional choice fair	41 interviews at 2 events	our table area at a much larger regional school choice fair event, held in a high school gymnasium, attracting 500-750 parents from the entire region

At the neighborhood events, our most successful workshops were organized with the assistance of the HPS school Family Resource Aides (FRAs), who helped us arrange access to school computer labs and attract interested parents with bilingual flyers. We conducted a total of 7 workshops at three HPS elementary schools (Betances, McDonough, and Parkville), all located in the predominantly Spanish-speaking South End of the city. All three of these schools were originally selected with our initial plan to identify "mandatory choosers," but we broadened our sample by welcoming parents of children in any grade level to attend. It is important to note that these neighborhood workshops were NOT located at schools across the city of Hartford, due to a combination of research design and logistical issues.

For the choice fairs, we successfully held workshops at two events organized by the Regional School Choice Office: the November 14th fair held at Sports and Medical Science Magnet, and the December 9th fair held at Hartford Public School. Although both were located in Hartford's South End, the broad publicity by the event organizers brought parents from across Hartford and many suburban areas.

Our workshops were staffed by teams of Trinity College students, ConnCAN staff, and Achieve Hartford staff who had received training in guiding parents through the website and asking interview questions. Trinity students received additional training to conduct more in-depth, recorded interviews, which typically lasted between 15 to 30 minutes, in English or Spanish. Our interview guide included a series of pre- and post-workshop questions, with personalized training on how to navigate and interpret the website. In addition, a Voice of Women of Color (VOWC) community organizer also contributed three additional interviews with parents conducted at neighborhood-type events. Our project received approval for ethical standards on human subject research from Trinity's Institutional Review Board (IRB).

Overall, we successfully interviewed 93 workshop participants who met our study criteria:

- 1) Student's next grade level was within preK-8, to measure influence of all sortable data columns.
- 2) Student's address from web statistics was located inside SmartChoices coverage area.
- 3) Interview guide included current school name; at least one school choice listed in pre- and post-workshop responses; post-workshop school must appear in SmartChoices results; most parent demographic responses are complete
- 4) UserID, grade, and date on the paper interview guide matched web statistics data
- 5) Web statistics indicated that the participant sorted results at least once, to confirm that the interviewer correctly asked each person to "Try the sort button."

Most importantly, all of the workshop participants in this study are **self-selected**, meaning that they voluntarily responded to a neighborhood event flyer or walked up to our regional school choice fair tables and agreed to participate. By definition, self-selected participants are **not necessarily representative of the Hartford-area population at large**. Therefore, when combined with the fact that our workshop events were not located across the entire city, our small, self-selected sample of 93 should not be interpreted to represent a broader population.

Furthermore, we emphasize that the 93 individuals in this study participated in a structured workshop, led by a trained guide for 15-30 minutes, on navigating and interpreting the SmartChoices website. This workshop experience differentiates this group from the larger population that used the website on their own, without guidance or explanation. Therefore, **any claims about the influence of SmartChoices on parent decision-making should be attributed to the workshop**, not the website alone.

How did participants vary between neighborhood & choice workshops?

We found that the neighborhood workshop participants were similar to those we met at the regional school choice fairs in some respects. Both groups were mostly non-whites, who searched for similar grade levels, had approximately the same number of school-age children, and had resided in the Hartford area for similar periods of time.

But the two groups of people attending these workshops differed in several important ways. For example, neighborhood workshops were attended by parents with lower levels of education compared those at choice fair workshops. At the neighborhood events, 37 percent reported receiving less than a high school diploma, while only 2 percent gave this response at the choice fair events, where participants were more likely to have college degrees.

Table 11: Education Level reported by SmartChoices workshop participants					
Education Level	Neighborhood		Choice Fair		Total
less than HS diploma	19	37%	1	2%	20
HS diploma	13	25%	12	29%	25
some college	10	19%	14	34%	24
college degree	8	15%	14	34%	22
not reported	2	4%			2
Total	52	100%	41	100%	93

Similarly, participants at neighborhood workshops were far more likely to describe themselves as inexperienced, new computer users (40 percent) compared to those at the choice fairs (7 percent).

Table 12: Computer Experience reported by SmartChoices workshop participants					
Computer Experience	Neighborhood		Choice Fair		Total
new user	21	40%	3	7%	24
regular user	31	60%	38	93%	69
Total	52	100%	41	100%	93

Furthermore, participants at the two types of events differed by race and language, with neighborhood events more likely to be attended by parents of Hispanic students, and who preferred working with a Spanish-language guide.

Table 13: Child's Racial/Ethnic Identity reported by SmartChoices workshop participants					
Race or Ethnicity	Neighborhood		Choice Fair		Total
Hispanic	38	73%	14	34%	52
Black	8	15%	17	41%	25
Multiracial	3	6%	2	5%	5
Asian			5	12%	5
Other	2	4%	1	2%	3
White	1	2%	2	5%	3
Total	52	100%	41	100%	93

Table 14: Language Preferred by SmartChoices workshop participants					
Language	Neighborhood		Choice Fair		Total
English	29	56%	32	78%	61
Spanish	23	44%	9	22%	32
Total	52	100%	41	100%	93

These differences between neighborhood and choice fair workshop participants were caused partly by logistical constraints and our research design. Given that our study criteria limited the scope to parents of children entering preK through 8th grade, the Hartford Public Schools invited us to schedule workshops in neighborhood schools with K-3 or K-6 grade levels, where we would be more likely to find “mandatory choosers,” meaning that students completing the final grade level at their current school would be required to submit an application to enter their next school. Three cooperating schools that fit this description (Betances, McDonough, and Parkville) are all located in Hartford’s South End, serving a larger proportion of the city’s Puerto Rican and other Latino families.

Table 15: Mandatory Chooser status of SmartChoices workshop participants					
Status	Neighborhood		Choice Fair		Total
voluntary	23	44%	34	83%	57
mandatory (final grade level)	29	56%	7	17%	36
Total	52	100%	41	100%	93

In turn, the participants we invited to neighborhood workshops tended to be less educated and less computer proficient than participants who were already attending the regional school choice fair (and happened to walk by our tables). Although the vast majority of workshop participants were non-white, they tended to be separated by the “digital divide”: some had easier access to computers and higher education, while others did not.

How did the SmartChoices workshop influence participants’ thinking?

We designed our study to measure the relative influence of the workshop experience on participants’ decision-making process. Before introducing the website, our interviewers asked a pre-workshop question: for one child in your family, what are your top choices for schools next fall? After hands-on web searching and sorting, we asked the same thing as a post-workshop question.

When we compared participants’ pre- and post-workshop responses for their top-choice schools, we found that the total sample divided into roughly equal thirds:

- a) about one-third *changed* their top choice, meaning a switch from school A to school B
- b) about one-third *clarified* their top choice, meaning they began the workshop with an uncertain response (“I don’t know”) or one too vague for an application form (“the school near Walmart”), but identified a specific school in their post-workshop response
- c) about one-third *did not change* their top choice, usually meaning that the workshop did not alter their first-ranked school selection

Table 16: Pre/Post response in Top-Choice school for SmartChoices workshop participants						
Response	Neighborhood		Choice Fair		Total	
changed	16	31%	16	39%	32	34%
clarified	18	35%	9	22%	27	29%
no change	18	35%	16	39%	34	37%
Grand Total	52	100%	41	100%	93	100%

We looked for meaningful differences in the pre/post responses between participants who attended the two different types of events. Although neighborhood workshop participants were more likely to have clarified their selections (35 percent) compared to those we encountered at the choice fair (22 percent), the distribution of responses was not statistically significantly different. Given our relatively small sample of 93 participants, a larger pool might have allowed us to make more robust claims.

For participants who changed, how did their pre/post choices differ?

For the 32 workshop participants who changed their top choices, we compared their initial selection (School A) to their final selection (School B), according to the four key data categories in the SmartChoices search results:

- a) distance from home, meaning [School B distance from home] minus [School A distance from home]
- b) racial balance, meaning [School B percent racial balance] minus [School A percent racial balance], where ideal is defined as 50-50 white/non-white student body
- c) test goal, meaning [School B test goal] minus [School A test goal]
- d) test gain, meaning [School B test gain] minus [School A test gain]

To compare pre/post responses across different categories, we expressed all of them in common units: Similar, Greater, or Less. A post-workshop response was “Similar” to a pre-workshop response if it fell within 1/3 of a standard deviation of the mean difference, defined as follows:

Category	Definition of a “similar” response
Test Goal	± 5 percentage points
Test Gain	± 2 percentage points
Racial Balance	± 6 percentage points
Distance	± 0.5 miles

We sorted the responses and those that fell above the threshold were counted as “Greater” while those falling below it were marked as “Less.” Missing data values (such as the lack of test scores for a new school) were omitted, meaning that the total frequency varies across categories, but all percentages are based on the total number of valid responses. (For distance, one outlier was ignored when calculating the mean and standard deviation, but it was factored back into the remaining analysis.)

Together, the table and the accompanying charts depict the relative influence of each of the four key data categories in the responses of the 32 workshop participants who changed their top-choice schools after exploring the website.

Table 17: Pre/Post Differences for Participants who Changed

Change	Test Goal		Test Gain		Racial Balance		Distance	
Less	4	14%	5	20%	6	20%	9	32%
Similar	5	17%	4	16%	10	33%	9	32%
Greater	20	69%	16	64%	14	47%	10	36%
Total	29	100%	25	100%	30	100%	28	100%

NOTE: All percentages based on valid responses.

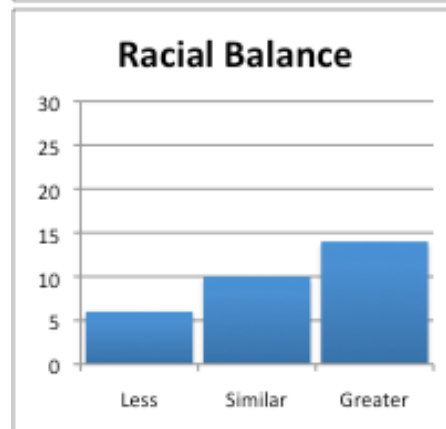
Test Goal was the most influential category for this sample, because 69 percent of valid responses given by participants who changed their top choices selected a new school with a greater difference in test goal data.

Test Gain was the second most influential category, with 64 percent of valid responses for those who picked new schools with a greater test gain.

Racial Balance was the third most influential category, with 47 percent of participants who changed schools selecting one with a greater racial balance.

Distance was the least influential category, at least at first glance, because roughly equal thirds of participants selected new schools that were farther away, similar distance, or closer to their homes.

Does this mean that parents who changed their top-choice schools were not concerned with distance? Not necessarily. An alternative way to interpret this result is that SmartChoices may have helped two-thirds of parents to discover schools that met their quality standards (on test scores or racial balance) but were located closer to, or a similar distance from home. Given that parents often make trade-offs between distance and school quality factors that they value, it is possible that the SmartChoices website provided these parents with information about better options that happened to be nearer or equally distant. Support for this interpretation appears in the next two sections of our analysis.



How did workshop participants sort their search results?

When we compared how website users sorted their results, we found similar patterns across three groups: the workshop participants who changed their top schools (n=32), workshop participants in general (n=93), and all SmartChoices website users.

After the initial random assignment, the most frequently selected categories were Test Goal and Distance (virtually tied, ranging between 22 to 27 percent). Following close behind the two leaders were Test Gain, Racial Balance, and School Name, in that order.

Table 18: Sorting categories selected, by type of user, after initial random assignment

Sorted by:	Participants who Changed schools (n=32)		All Workshop Participants (n=93)		All Users of SmartChoices during Year 2	
	Total	Percent	Total	Percent	Total	Percent
Test goal	25	27%	69	23%	487	24%
Distance	21	23%	66	22%	499	25%
Test gain	18	20%	59	20%	393	19%
Racial balance	14	15%	50	17%	342	17%
School name	14	15%	50	17%	308	15%
TOTAL sortings by subgroup	92	100%	294	100%	2029	100%

This finding supports our interpretation that distance matters, and for two-thirds of the workshop participants who changed schools, SmartChoices appears to have helped them to identify “better” schools that happened to be located closer or a similar distance than their initial top-ranked schools.

Furthermore, when comparing the sorting patterns of workshop participants overall, we found two extremes. Participants either tend to sort only once as requested by their workshop guide (33 percent), or they tend to sort three or more times to explore the results in richer detail (51 percent). While our cross-tabulation table relies on small numbers, we are intrigued that participants who sorted 3 or more times were more likely to self-report as regular computer users (54 percent) than new users (42 percent).

Table 19: Sorting activity among workshop participants, by Computer Experience

Number of times sorted	New User		Regular User		Total	
1	8	33%	22	32%	30	33%
2	6	25%	9	13%	15	16%
3+	10	42%	37	54%	47	51%
Total	24	100%	68	100%	92	100%

What school data did participants perceive to be most important?

For those participants who changed their top-choice schools from the pre- to the post-workshop session, we thematically analyzed their interview transcripts (for the 25 recordings available from this group of 32). We listened carefully to participant's views on why they changed their school, and what information they discovered in the website (if any) influenced their decision. We coded interview transcripts by the presence of any of our three major themes (Tests matter, Racial Balance matters, Distance matters), and subthemes as appropriate. The total is greater than 100 percent due to the presence of multiple themes within any individual interview.

Table 19: Frequency of themes in available transcripts of workshop participants who changed

Theme:	Frequency	Percent of transcripts
Test Scores matter	16	64%
Test Gain specifically	7	
Test Goal specifically	6	
Test scores in general	2	
Racial Balance matters	8	32%
More diversity preferred	3	
Same-race students preferred	2	
Distance matters	7	25%
Closer to home preferred	7	
TOTAL transcripts available	25	Greater than 100% due to multiple themes per transcript

Workshop participants who changed schools clearly felt that tests matter (64 percent), but those who specifically identified the value-added Test Gain measure (7 people) were slightly higher than those who specifically named Test Goal (6 people). Racial balance was the second most commonly identified theme in the transcripts for this group (32 percent), with some specifically preferred more racial diversity (3 people) while others expressed a preference for same-race students as their child (2 people). Finally, among all who expressed a view that distance matters (25 percent), each of them preferred a school located closer to home.

How did participants talk about school data while using SmartChoices?

Based on the tables above, we summarized the stories of three individuals who illustrate the patterns we observed among workshop participants who changed their top-choice schools (based on the same 25 interview transcripts available for this group of 32). Each vignette explains how parental interactions and interpretations of SmartChoices data are very contextual, based on their past and present experiences of schooling their particular children. Some parents were timid about technology while others explored the website extensively. Furthermore, while some parents focused exclusively on one category of school data, others weighed options based on different factors that appealed to them, though many eventually favored one category above others. (For additional qualitative analysis and copies of the English and Spanish interview guides, see Coyne, 2010.)

Parent Interview 1: Test Scores Matter

Many parents emphasized the importance of test scores above other categories while searching our website. Parent 1 was the mother of a Hispanic Hartford child entering 5th grade, who already had extensive knowledge of school choice programs, based on the fact that she had applied the previous year and her daughter was placed on the wait list. She also identified herself as a regular computer user and had some college education. But when the website told her that there were over 30 schools to which she was eligible to apply, that number initially overwhelmed her. “Oh my God, that’s a lot of options. Whoa!” she exclaimed upon viewing the results. As she scrolled through the list, her eyes focused on Test Goal and Test Gain. “That one’s good. They’re almost at the state average and improving,” she commented about one school, comparing to “this one [that] went down five points. . . This is really cool.” Test scores were important to her because, as she explained, her daughter “was one of the top students” in her Hartford district school. “The Test Goal and the Gain. . . interest me more because I know she’s gonna get her education. . . I don’t want to be bringing her to a school where she’s going, ‘Oh, I’m bored,’ they’re not doing nothing that’s educational for her, cause I know her.” She sorted her results three times, ranking them by Test Gain, Test Goal, and then Racial Balance. After exploring the website she switched her top school from one interdistrict school program to another. Her post-workshop choice happened to have greater racial diversity and was located further away than her pre-workshop choice, but the driving factor in her mind was combination of Test Goal and Test Gain. (Source: Parent 1941.)

Parent Interview 2: Racial Balance Matters

Some parents concentrated on the racial composition of students in schools, and weighed this against other factors, while searching the website. Parent 2 was the mother of a Black child in a Hartford district school who was preparing to enter 5th grade. This parent described herself as a new computer user a high school diploma, and had moved from a large Southern city into the Hartford area less than a year ago. When she scrolled through her search results, she spotted her child’s current school and remarked on its relatively low Test Goal. “So __ percent only? Oh, my goodness. Wow, okay.” But then she focused intently on Racial Balance for most of the workshop. “Let’s go by [Racial] Balance first. Is this the one that I choose?” she asked her SmartChoices guide. “I like this one, this has a [racial] balance, a nice balance I would say,” she explained when switching her top-ranked choice to an interdistrict magnet school that happened to be located about a mile away. The parent explained that in her daughter’s current school, “the balance is unbelievable” because the school was overwhelmingly Hispanic. A racially balanced school was important to her because “I think it helps kids learn better, too. It would be any race, not just Spanish, three-quarters Spanish.” She sorted the data only once, from her randomly assigned Racial Balance column to Distance. “This [website] is an excellent, a good idea,” she declared. “I wish I had this when I first got here, rather than shove them into the closest schools.” Overall, this parent appeared to favor Racial Balance, followed by Test Goal. “Forget the distance,” she concluded. (Source: Parent 2043.)

Parent Interview 3: Distance Matters

Other parents were interest in choosing a different school, but only if it was located close to their homes. Parent 3 was a Latina mother with less than a high school education, who did not feel comfortable around computers, and preferred to be

interviewed in Spanish. She explained that her daughter would be repeating 5th grade again due to language difficulties. “Porque ella habla inglés, pero ya no sabe leer y escribir en inglés. *Because she speaks English but still doesn’t know how to read and write in English.*” Next year, due to the current school’s shift in grade levels, she needed to make a new choice for her daughter. The map and distance information in SmartChoices pleasantly surprised this parent. “Es esta la milla de mi casa a la escuela? *Is this the mileage from my house to the school?*” she asked her interviewer. The parent had initially selected a relatively low-performing district school in her neighborhood, but the website helped her to see that a slightly better-performing interdistrict magnet school, which the parent had previously heard about, also was located nearby. “La escuela es super-buenísimo. Le doy el número uno. *The [magnet] school is fabulous. I give it my number one choice,*” she decided, describing how its special curricular offerings would be a good match for her daughter’s interests, considering its nearby location. Overall, this parent sorted her website results only once, preferring to look at the Distance category. (Source: Parent 2303.)

Conclusion:

Why the Digital Divide Matters for Public School Choice

Whether or not increasing the number of school options actually improves public education for all, the choice movement has attracted multiple supporters in our politically divided nation, particularly in metropolitan Hartford. Advocates of the *Sheff* ruling support voluntary interdistrict magnet schools and city-suburban transfers as the most viable means to racially integrate schools. Also, market-oriented reformers embrace public school choice as a means to empower urban parents to exit low-performing schools and enter those more likely to reduce the achievement gap. “Choice” has become such a politically popular label in metropolitan Hartford that it appears in the name of at least three distinct entities: the Open Choice city-suburban transfer program, the Regional School Choice Office, and the Hartford Public School’s “All-Choice” initiative.

Furthermore, we cannot ignore the influence that the Internet has had on consumerist activity in “shopping” for public schools. Google, the ubiquitous search engine, recently reported that the category of “school comparisons” was the leading type of public data search conducted on its website in November 2009. In this report (Schwarzler 2010), Google defined “school comparisons” as any search on education from preK to higher ed, such as: “douglas county schools” or “top law schools.” Indeed, other categories might have ranked higher if Google had not broken out certain subgroups of searches, such as separating “cancer” from “health” searches in general. But the report confirms that citizen-consumers are eagerly looking to the Internet to help them make judgements about comparing the relative qualities of different educational options.

Setting aside the reasons why different reformers support choice, all agree that families need access to reliable information to make informed decisions about public schools. To be sure, some information flows through parents’ social networks: the opinions of trusted relatives and neighbors, conversations with principals and teachers, and personal visits to schools. But other sources of information -- such as student achievement, racial balance, distance from home, and program offerings -- are more readily available on the Internet. In this digital realm, SmartChoices has positioned

itself as the “Consumer Reports” of public school choice in the Hartford region. We compile public school data from official sources, upload it onto our parent-friendly bilingual website, and configure it to automatically display all eligible choices by home address and grade level. SmartChoices is an independent project, not affiliated with any school, district, or choice program, which enables us to provide comparative and objective information, rather than promotional material favoring one choice over another.

Yet access to information, and knowledge about how to search and interpret websites, is not uniformly distributed. The “digital divide” was more commonly discussed a decade ago, but it has not disappeared, and remains as one of the most challenging barriers in the twenty-first century knowledge-driven economy. While working on the SmartChoices project, we were struck by the difficulty of obtaining reliable, current data on the scope and size of the digital divide in the Hartford region. In 2007, the US Census Current Population Survey posed this question to a national sample: “Do you (or anyone in this household) connect to the Internet from home?” The proportion responding “Yes” who resided in the city of Hartford ranged from 34 to 55 percent, while those living in the three-county Hartford metropolitan statistical area ranged between 75 to 92 percent. The range in estimates is due to the large number of people whose responses were omitted because they answered “No” or did not respond to the initial question, “Do you access the internet from any location?” Therefore, if we include these omitted responses, the results point to the low end of the estimated range.

Table 21: Estimated access to Internet from home, 2007

Region	Low estimate	High estimate
City of Hartford	34%	55%
Hartford metropolitan area	75%	92%

Source: Data calculations based on US Census Bureau, Current Population Survey, October 2007, *Survey on Internet and Computer Use*, question HENET3, provided by the Hartford Public Library, “Digital Access in the Hartford Region” (2009a). The Hartford-West Hartford-East Hartford metropolitan statistical area (MSA) currently comprises three counties (Hartford, Tolland, Middlesex) and 57 towns.

Beyond this issue of Internet access, we still lack comprehensive data on the true scope of adult literacy -- particularly computer literacy -- among residents of the city of Hartford, compared to the metropolitan region or state. See the most recent available county-level adult literacy data at Hartford Public Library (2009b). Based on our first-hand experience with the SmartChoices parent workshops, we witnessed a wide range of computer ability between adults who self-identified as new versus regular users.

As the “SmartChoices” name clearly implies, familiarity with the World Wide Web has become a necessary ingredient to be an informed consumer of public education in Greater Hartford. The rapidly expanding (and constantly changing) set of public school options, as well as differences between competing choice providers and their eligibility guidelines, made it nearly impossible for us to communicate with parents through a paper booklet or catalog. We created SmartChoices as a dynamic website because we could not conceive of a way to adequately present the key information that each parent needed on paper. Furthermore, beginning in January 2010, the Hartford Public School

Choice Office shifted from paper-only to web-only applications. For families in our urban setting, learning how to navigate the Internet is not an option, but a requirement.

Of course, digital tools like SmartChoices are only valuable to people who have access and knowledge of how to use them. Our research uncovered differences between workshop participants at neighborhood versus regional choice fairs, with the latter group better educated and more computer savvy. If school choice is expected to improve public education for all, then future SmartChoices community outreach needs to focus on novice computer users, with information literacy to help people understand and interpret key data categories, as well as hands-on guidance on web skills such as sorting data and following through with on-line applications.

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