

Parents, Maps, and Public Schools: The SmartChoices Project in Greater Hartford, Connecticut



A screenshot of the SmartChoices website. The page title is "SmartChoices" and it is described as "A PARENTAL GUIDE TO Public School Choice IN THE GREATER HARTFORD REGION". The page features a search form on the left with fields for "Student's home address" and "Student's grade next year in Fall 2008". A map on the right shows the Greater Hartford region with various school locations marked by colored pins. Below the map is a table of search results.

School & Management	Address	Dist.	Grades	More Info	Racial Balance	Test Goal	Test Gain
Packville Community School (Hartford Public Schools)	1724 Park St Hartford, CT HPS zone 3	1.1 miles	PreK to 6	Apply to HPS Choice after Jan 4 Preference for your Neighborhood	43%	43%	43%



by Jack Dougherty, Courteney Coyne '10,
Jean-Pierre Haeberly, and David Tatem
[Cities, Suburbs, and Schools Project at Trinity College](#)

Presentation for NEARC May 2010

What is SmartChoices?

Parent-friendly website to navigate growing number of district and interdistrict public education options

Address-specific tool identifies all eligible choices among 200+ metro area public schools

Coverage area:
City of Hartford and 18 suburbs

<http://SmartChoices.trincoll.edu>

A DIGITAL GUIDE TO
Public School Choice
IN THE GREATER HARTFORD REGION

SmartChoices

HOME ABOUT THIS WEBSITE CONTACT US

• SEARCH FOR SCHOOLS •

Student's home address:
eg. 300 Summit St, Hartford, CT 06106

You live in Hartford zone 3

Student's grade next year in Fall 2010:
6th Grade

Show me public schools:
 District schools
 Interdistrict schools

SEARCH

37 schools found.

Sort by: Text gain

User: 3748

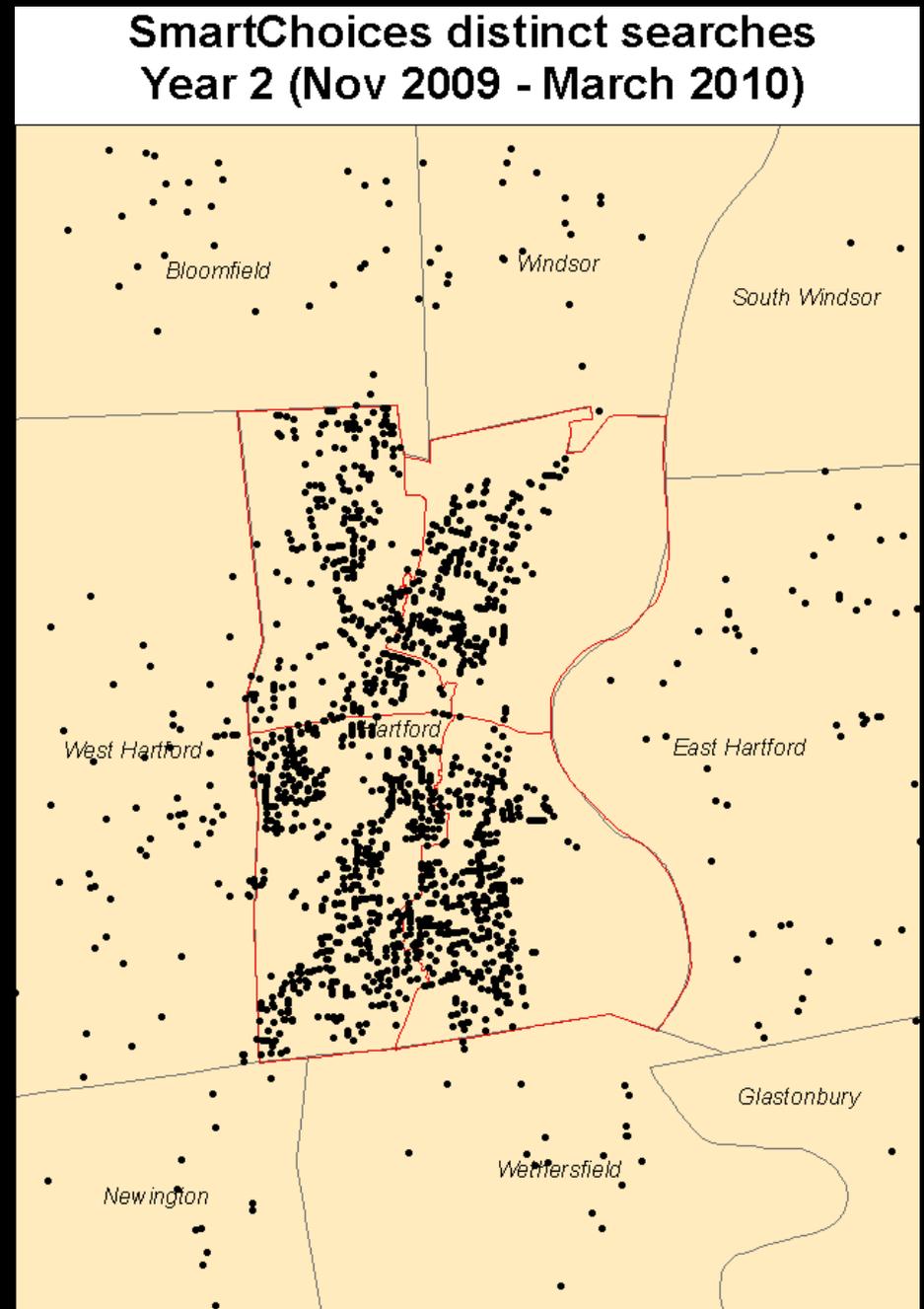
School & Management (click for school)	Address (click for address)	Dist. (straight line) (click for dist)	Grades	More Info	Racial Balance Black Hispanic Asian/Pacific Islander Other 2008 (click for dist)	Test Goal Students at or above in zone (click for dist)	Test Gain Score grade goal % zone (click for dist)
Parkville Community School (Hartford Public Schools)	1735 Park St Hartford, CT HPS zone 3	1.1 miles	PreK4 to 6	Apply to HPS Choice after Jan. 4 Preference for your Neighborhood Performance Site 2009			43% CT Avg

Map of the Greater Hartford region showing school districts. The City of Hartford and 18 surrounding suburbs are highlighted in blue. The map includes labels for various districts such as Hartford, East Hartford, West Hartford, and others.

Who uses SmartChoices?

3,385 distinct searches
during 5-month window

77% in City of Hartford
23% in suburbs &
outlying areas



Why did we create SmartChoices?

1) Sheff desegregation remedy expanded interdistrict magnets

5 interdistrict magnets, Fall 1999
approximate locations

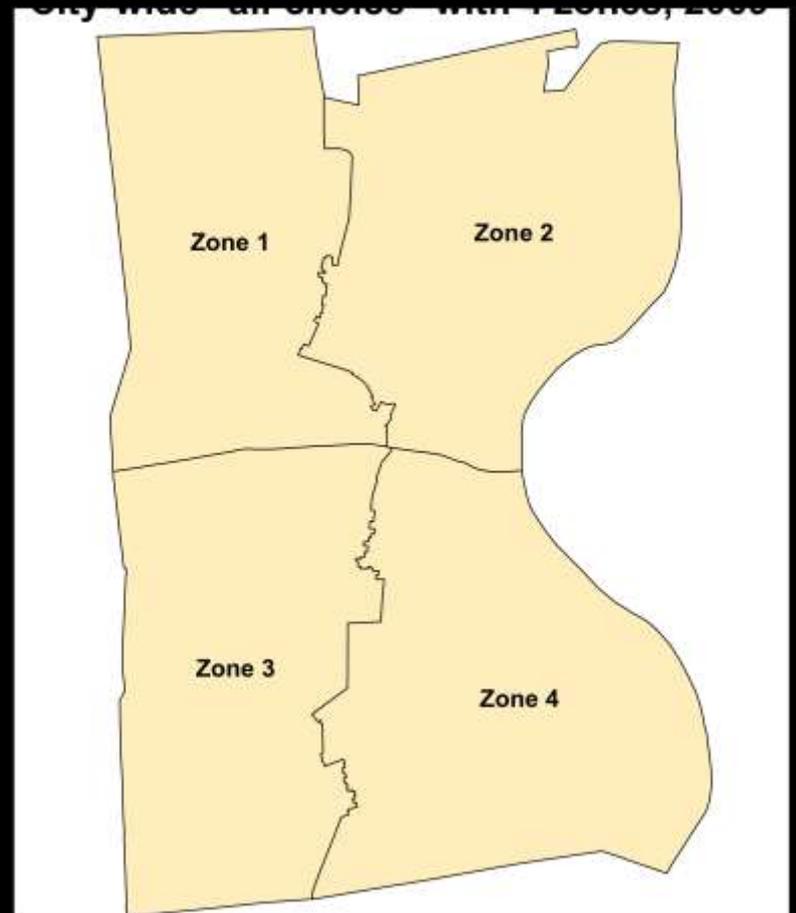


26 interdistrict magnets, Fall 2009



Why did we create SmartChoices?

- 1) Sheff desegregation remedy expanded interdistrict magnets
- 2) City shifted from assigned schools to citywide “all-choice”



Why did we create SmartChoices?

- 1) Sheff desegregation remedy expanded interdistrict magnets
- 2) City shifted from assigned schools to citywide “all-choice”
- 3) Parents confused by competing choice providers, with different applications and no comprehensive info source

• SEARCH FOR SCHOOLS •

Student's home address: 
eg. 300 Summit St, Hartford, CT 06106

300 summit st, hartford, ct

You live in Hartford zone 3

Student's grade next year in Fall 2010:
6th Grade 

Show me public schools:

[District schools](#) 

[Interdistrict schools](#) 

SEARCH

37 schools found.

How did we use GIS to create SmartChoices?

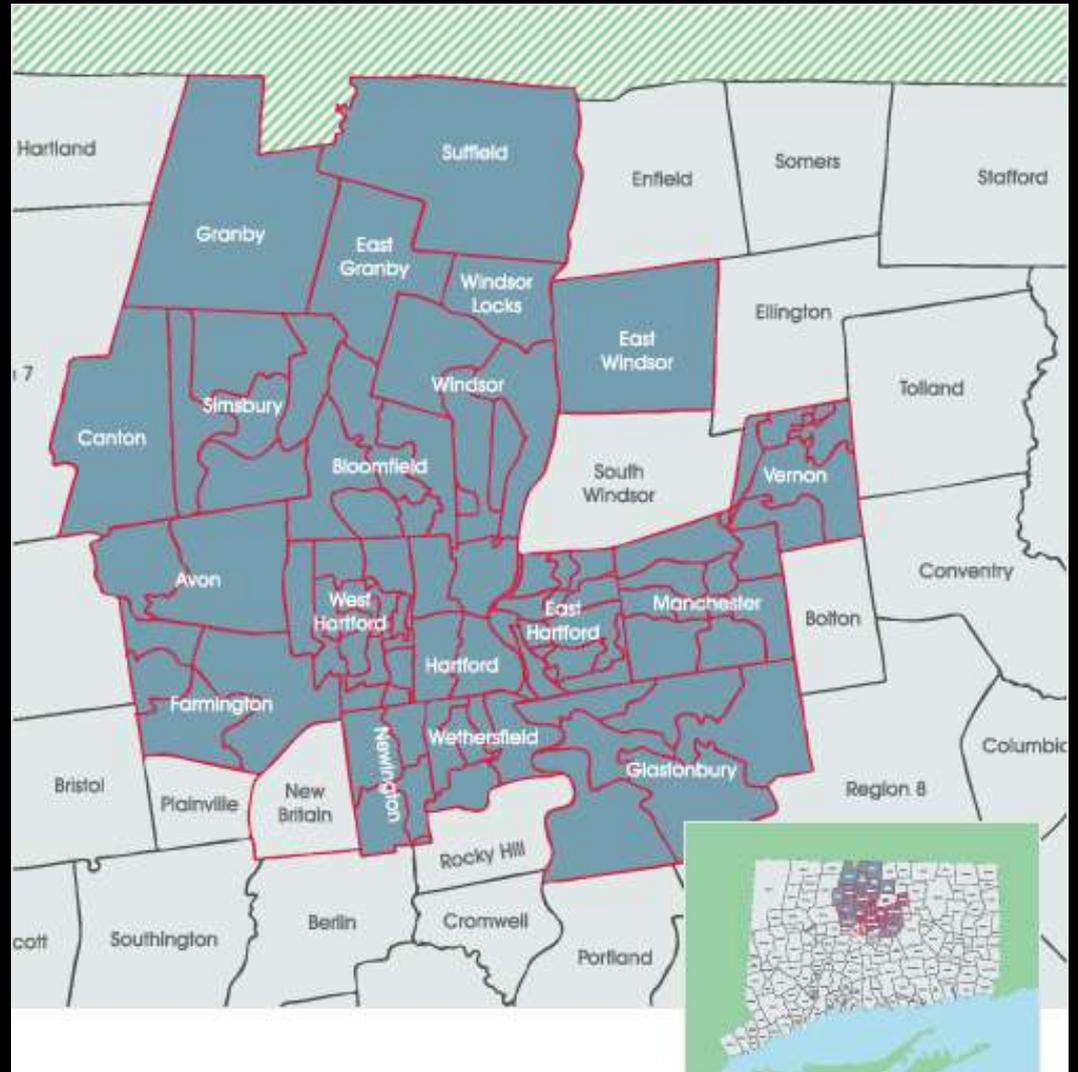
1) Students compiled and digitized public school attendance zones from Hartford & 18 suburban districts

Sources:

- GIS school zone maps
- Paper school zone maps
- Lists of streets by zone

Illustration:

Grade 1 attendance zones for current coverage area



How did we use GIS to create SmartChoices?

2) Academic Computing staff created web-based search engine and map application

Google Maps address locator places point inside school attendance polygon (KML file)

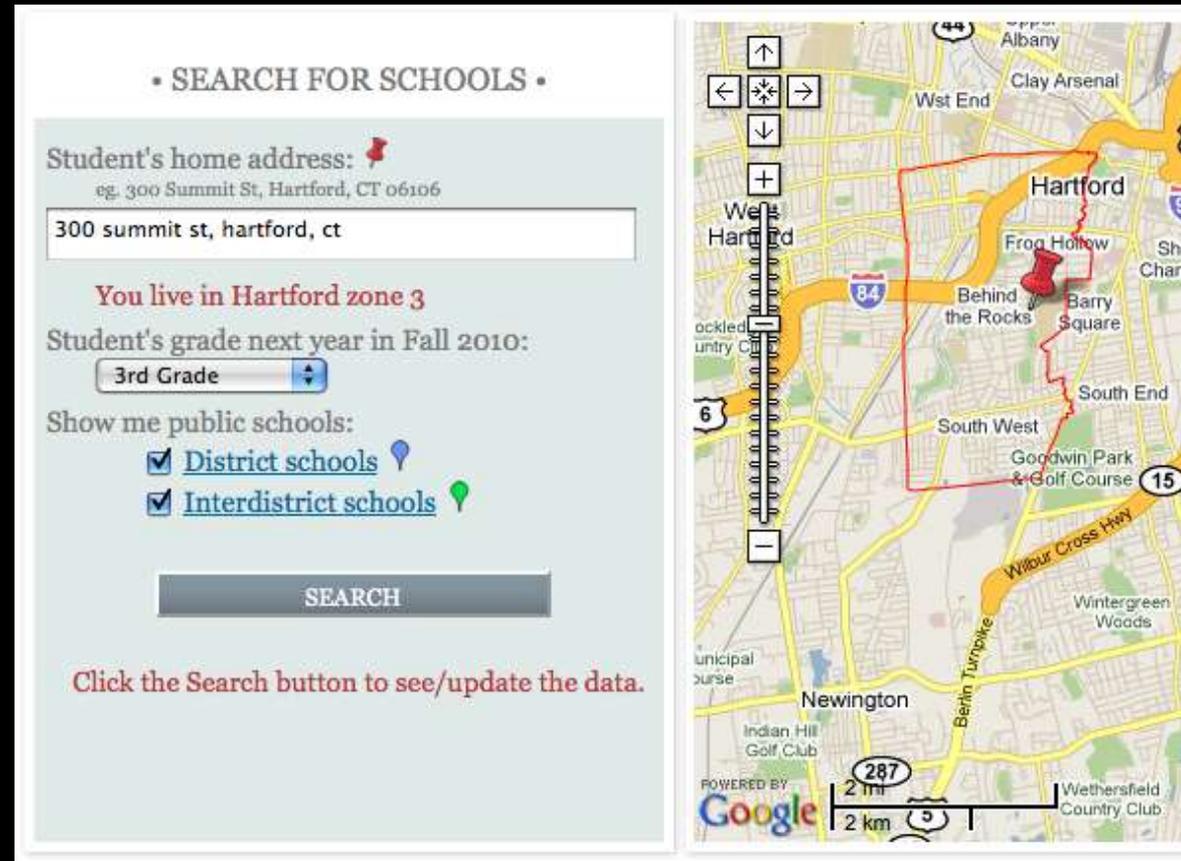


Illustration:

Red pin is home address
Outline is HPS zone 3

How did we use GIS to create SmartChoices?

3) Our customized web application connects:

- Geocoded address and student grade level

- Eligibility rules for both district schools (by attendance zone) and interdistrict schools

- Database of over 200 schools and attributes

Illustration:

Excerpt of database and search results

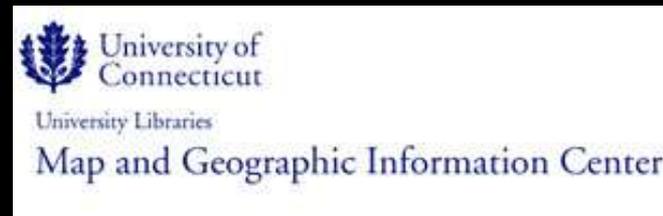
A	B	C	D	E	F	G
ID	Descr	DescrShort	Manager	Type	Lat	Lng
1	Jumoke Academy	Jumoke	CT Dept of Ed charter	1	41.7917	-72.698
2	Odyssey Community School	Odyssey	CT Dept of Ed charter	1	41.7811	-72.551
3	East Hartford-Glastonbury Elem Magnet	EH-G	CREC	1	41.7351	-72.591
4	Big Picture High School	Big Picture	Bloomfield Public Schools	1	41.8704	-72.735
5	CT International Baccalaureate Academy	CIBA	East Hartford Public Schools	1	41.7526	-72.605
6	Breakthrough Magnet School	Breakthrough	Hartford Public Schools	1	41.7462	-72.708
7	Capital Preparatory Magnet School	Cap Prep	Hartford Public Schools	1	41.7682	-72.673
8	Classical Magnet School	Classical	Hartford Public Schools	1	41.7731	-72.7
9	Charter School for Young Children	CSYC	CREC	1	41.7746	-72.706
10	Greater Hartford Academy of the Arts	GHAA	CREC	1	41.7514	-72.684
11	Greater Hartford Academy of Math & Science	GHAMAS	CREC	1	41.7514	-72.684
12	Great Path Academy	GPA	CREC	1	41.7645	-72.555
13	Hartford Magnet Middle School	HMMS	Hartford Public Schools	1	41.7513	-72.687
14	International Magnet School for Global Citizenship	International	CREC	1	41.7635	-72.616
15	R.J. Kinsella Magnet School of the Arts	Kinsella	Hartford Public Schools	1	41.7549	-72.665
16	Metropolitan Learning Center	MLC	CREC	1	41.8705	-72.724
17	Montessori Magnet School	Montessori CREC	CREC	1	41.7495	-72.687
18	Montessori Magnet School at Annie Fisher	Montessori HPS	Hartford Public Schools	1	41.7916	-72.707
19	Noah Webster MicroSociety Magnet School	Noah Webster	Hartford Public Schools	1	41.7689	-72.712
20	Pathways to Technology	Pathways	Hartford Public Schools	1	41.8069	-72.659
21	Public Safety Academy	Public Safety	CREC	1	42.0217	-72.563
22	Reggio Magnet School of the Arts	Reggio	CREC	1	41.8168	-72.834
23	Sport & Medical Sciences Academy	Sport & Med Sci	Hartford Public Schools	1	41.7525	-72.661
24	Two Rivers Magnet Middle School	Two Rivers	CREC	1	41.7594	-72.657
25	University of Hartford Magnet School	UHMS	CREC	1	41.7945	-72.717

School & Management <small>(click for website)</small>	Address <small>(in 2020-2021) (click to zoom)</small>	Dist. <small>(in 2020-2021) (click to zoom)</small>	Grades	More Info	Racial Balance <small>Black Hispanic White Asian/Ind October 2009 (click to zoom)</small>	Test Goal <small>Students at or above in 2009 (click to zoom)</small>	Test Gain <small>across grades 2008 to 2009 (click to zoom)</small>
America's Choice at SAND <small>(Hartford Public Schools)</small>	1750 Main St Hartford, CT HPS zone 2	2.3 miles	PreK to 6	Apply to HPS Choice after Jan 4 See HPS transportation			
Annie Fisher School <small>(Hartford Public Schools)</small>	280 Plainfield St Hartford, CT HPS zone 1	3.2 miles	1 to 8	Apply to HPS Choice after Jan 4 See HPS transportation			
Asian Studies Academy at Bellizzi <small>(Hartford Public Schools)</small>	215 South St Hartford, CT HPS zone 4	1.0 miles	3 to 8	Apply to HPS Choice after Jan 4 See HPS transportation			

How did we use GIS to create SmartChoices?

4) All of the school attendance zones we digitized will be publicly available through MAGIC

Web-based application code is open source upon request, available for modification elsewhere



Education

Layer Name	Type	Year
2008 Connecticut Elementary School Districts		2010
2008 Connecticut Middle School Districts		2010
2008 Connecticut High School Districts		2010
2009 Hartford Area School Districts		2010
2008 Hartford Area Elementary School Districts		2010
2008 Hartford Area Middle School Districts		2010
2008 Hartford Area High School Districts		2010
2007 Glastonbury Elementary School Districts		2010
2006 Glastonbury & Newington Elementary School Districts		2010

How does SmartChoices differ from other school search tools?

Many popular websites show schools by zip-code proximity, but SmartChoices lists schools by actual eligibility

Our address & grade-specific tool lists ALL of the public district and interdistrict schools to which families may apply in our area

The screenshot shows the GreatSchools website interface. At the top, there is a logo for GreatSchools with the tagline "Involved parents. Successful kids." and a search bar. Below the logo, there are navigation tabs for "Home", "Find a School", "Preschool", "Elementary School", and "Middle". A secondary navigation bar includes "Health & Development", "Academics & Activities", "Learning Disabilities", "Improve Your School", and "Choose the Right".

The main content area displays "Elementary schools found within 5 miles of zip code 06106". Below this, it states "1-10 of 92 elementary schools found within 5 miles of zip code 06106, sorted by distance." and provides pagination options: "1-10 11-20 21-30 31-40 41-50 51-60 61-70 71-80 81-90 91-92 next > | Show all >".

There are four tabs for filtering: "OVERVIEW" (selected), "TEST SCORES", "TEACHERS/STUDENTS", and "ETHNICITY". Below the tabs is a table of school listings with the following columns: "School name", "Distance", "School type", "GreatSchools Ratings", "Parent Reviews", and "Students per FTE teacher".

Sort by School name	Sort by Distance	Sort by School type	Sort by GreatSchools Ratings	Sort by Parent Reviews	Sort by Students per FTE teacher
<input type="checkbox"/> Moylan School	0.1	public	1	Read >	14
<input type="checkbox"/> McDonough School	0.3	public	1	Read >	14
<input type="checkbox"/> Hooker School	0.5	public	3	Read >	15
<input type="checkbox"/> Montessori Magnet School	0.5	public	4	Read >	17
<input type="checkbox"/> St. Augustine School	0.7	private	—	Read >	12
<input type="checkbox"/> Greater Hartford Academy of Math and Science	0.7	public	—	Rate it!	—
<input type="checkbox"/> Hartford Christian School	0.8	private	—	Rate it!	—

The Parent Workshop Research Design

We conducted outreach workshops and interviewed **self-selected** participants (n=93) who fit our study criteria:

- searching preK to 8th grade inside coverage area
- sorted web results at least one time

Interviews	Event Type
52	Neighborhood school workshops
41	Regional School Choice Fairs



How did participants differ in Neighborhood vs Choice Fairs?

While both groups were mostly non-white parents, Neighborhood workshop participants had less educated and computer experience than Choice Fair participants.

Table 11: Education Level reported by workshop participants

Education Level	Neighborhood	Choice Fair	Total
less than HS diploma	37%	2%	22%
HS diploma	25%	29%	27%
some college	19%	34%	26%
college degree	15%	34%	24%
not reported	4%		2%
Total	100%	100%	100%

Table 12: Computer Usage reported by workshop participants

Computer Experience	Neighborhood	Choice Fair	Total
new user	40%	7%	26%
regular user	60%	93%	74%
Total	100%	100%	100%

How did participants differ in Neighborhood vs Choice Fairs?

While both groups were mostly non-white parents, Neighborhood workshop participants had less educated and computer experience than Choice Fair participants.

Table 11: Education Level reported by workshop participants

Education Level	Neighborhood	Choice Fair	Total
less than HS diploma	37%	2%	22%
HS diploma	25%	29%	27%
some college	19%	34%	26%
college degree	15%	34%	24%
not reported	4%		2%
Total	100%	100%	100%

Table 12: Computer Usage reported by workshop participants

Computer Experience	Neighborhood	Choice Fair	Total
new user	40%	7%	26%
regular user	60%	93%	74%
Total	100%	100%	100%

How did participants differ in Neighborhood vs Choice Fairs?

While both groups were mostly non-white parents, Neighborhood workshop participants had less educated and computer experience than Choice Fair participants.

Table 11: Education Level reported by workshop participants

Education Level	Neighborhood	Choice Fair	Total
less than HS diploma	37%	2%	22%
HS diploma	25%	29%	27%
some college	19%	34%	26%
college degree	15%	34%	24%
not reported	4%		2%
Total	100%	100%	100%

Table 12: Computer Usage reported by workshop participants

Computer Experience	Neighborhood	Choice Fair	Total
new user	40%	7%	26%
regular user	60%	93%	74%
Total	100%	100%	100%

How did workshops influence parents' thinking?

We asked the same pre- and post-workshop question:
For one child in your family, what are your top choices for schools next fall?

Table 16: Pre/Post response in Top-Choice school for workshop participants

Response	Neighborhood	Choice Fair	Total
changed	31%	39%	34%
clarified	35%	22%	29%
no change	35%	39%	37%
Grand Total	100%	100%	100%

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

For the 32 participants who changed their top choices, we compared their pre/post selections, and categorized them: Similar (1/3 St Dev of mean difference), Less, or Greater.

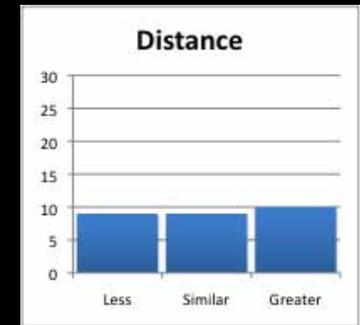
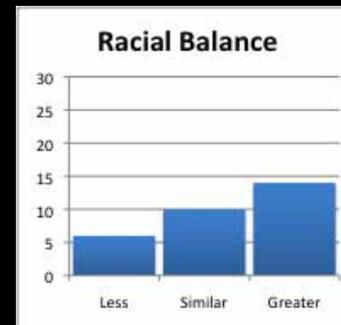
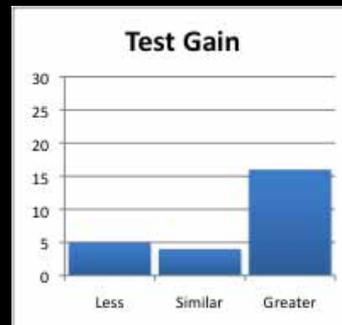
Category	Definition of a “similar” response
Test Goal	± 5 percentage points
Test Gain	± 2 percentage points
Racial Balance	± 6 percentage points
Distance	± 0.5 miles

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

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.

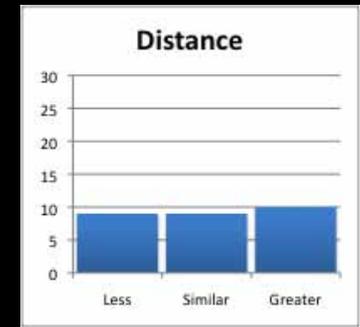
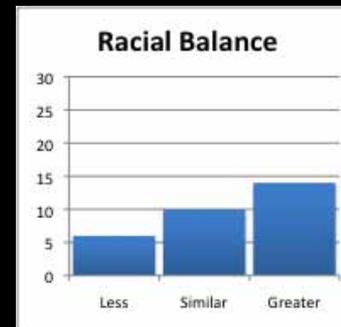


For participants who changed, how did pre/post choices differ?

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.

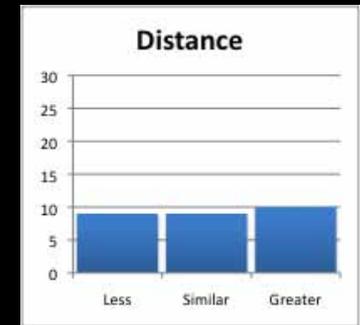
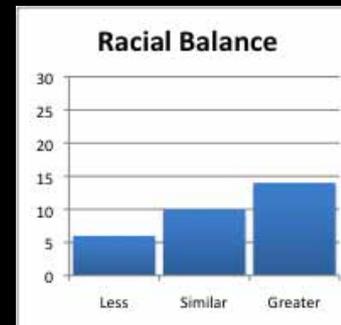
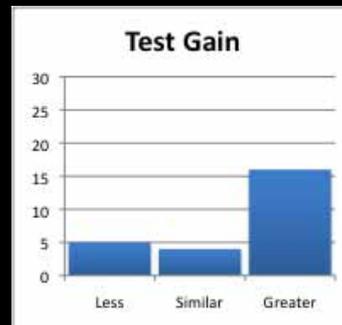


For participants who changed, how did pre/post choices differ?

Table 17: Pre/Post Differences for Participants who Changed

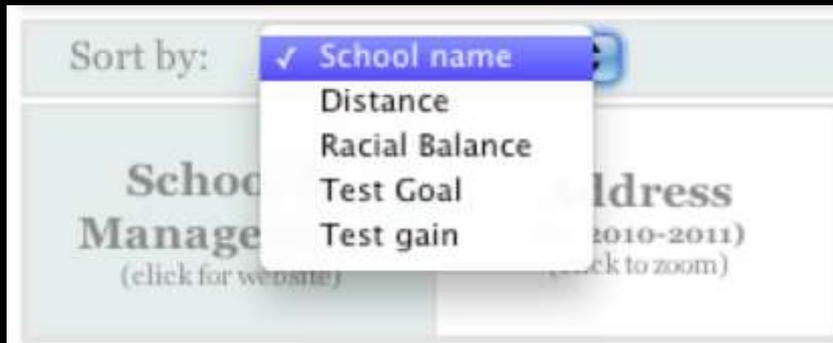
Change	Test Goal		Test Gain		Racial Balance		Distance	
Less	4	14%	5	20%	6	20%	9	32%
Similar	5	17%	4	16%	10	33%	9	32%
Greater	20	69%	16	64%	14	47%	10	36%
Total	29	100%	25	100%	30	100%	28	100%

NOTE: All percentages based on valid responses.



Does this mean that parents who changed their top-choice schools were not concerned with distance? Not necessarily. . .

How did people who used SmartChoices sort their results?

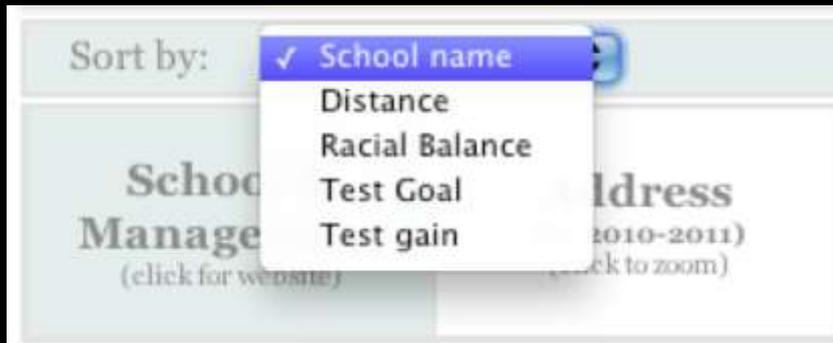


Across all groups, most frequently selected categories: Test Goal and Distance.

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%

How did people who used SmartChoices sort their results?



Across all groups, most frequently selected categories: Test Goal and Distance.

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%

How did people who used SmartChoices sort their results?

We found two extremes among workshop participants: 33 % sorted once (minimum request by workshop guide) vs. 51 % who sorted three or more times. The latter were more likely to self-report as regular computer users.

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%

By comparison, in the larger population of 3,385 distinct searches, 70 % did not sort their results.

What data did participants perceive to be most important?

We thematically coded 25 interviews (out of 32 who changed top-choice schools), and found three major categories:

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

What data did participants perceive to be most important?

Parent 1: Test Scores Matter (64%)

“That’s one’s good. They’re almost at the state average and improving. . . The Test Goal and the Gain. . . interest me more because I know she’s going to get her education.”

Parent 2: Racial Balance Matters (32%)

“I like this one, this has a [racial] balance, a nice balance I would say.” Racial balance matters because “I think it helps kids learn better. It would be any race, not just Spanish, three-quarters Spanish.”

Parent 3: Distance Matters (25%)

“Es esta la milla de mi casa at la escuela? [Is this the mileage from my house to the school?]”

Research paper available on website

Cities, Suburbs & Schools Project
at Trinity College, Hartford, CT

Home
About
People
Seminar
Research
Sheff Report
SmartChoices
On The Line:
Historical Maps
Trinity College



Guiding parents on school options with SmartChoices

Population Change in Hartford County, 1900-2000



1 dot = 1,000 people 1900

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

SmartChoices

Cities, Suburbs
and Schools Project
— AT —
Trinity College
HARTFORD CONNECTICUT



Great Schools for All
ConnCAN



**Achieve
Hartford!**
A Compact for Education Excellence

Thanks to SmartChoices community partners, and most importantly, the parents who participated in our research