GPS STRATEGY DEVELOPMENT May 27, 2011

Results of GPS Community Satisfaction Survey, 2011

Development of the *Community Satisfaction Survey 2011* (*CSS 2011*) was led by the Gloucester School Committee's Programs subcommittee as part of that committee's ongoing effort to develop a comphrensive array of measures of Gloucester Public School District (GPSD) performance. The *CSS 2011* was then tested, fielded, and analyzed by Cognigraphics Consulting. [1]

CSS 2011 is intended to assess the external satisfaction with the district--parent and community member satisfaction with all aspects of the educational program in GPSD. At the same time, staff were encouraged to participate in order to provide a check on any divergence between internal and external views of programming.

CSS 2011 development involved review of several published school stakeholder surveys. Quantitative satisfaction measures on the survey were piloted with representative parents and staff of GPS to ensure readability and relevance. Structure of the final survey is shown in the table here.

CSS 2011 SURVEY QUESTIONS

1. Respondent demographics
   - Grades enrolled
   - Schools enrolled
   - Special programming
   - Relations to GPS (parent, staff, etc.)
2. Satisfaction measures
   - Change in satisfaction from prior year
   - Current overall satisfaction
   - Current satisfaction with
     - Instruction & Learning (9 items)
     - Resources for learning (5 items)
     - Staff (5 items)
     - Extracurricular (3 items)
     - Facilities (3 items)
     - School Environment (6 items)
     - Parental engagement (3 items)
3. Importance of various sources of information about GPS
4. Willingness to recommend GPS
5. Open-ended questions
   - What would delight you?
   - What's your single biggest complaint?
   - What's your single best experience?
   - What advice would you give to strategic planning team?

Cf. Appendix A for complete survey

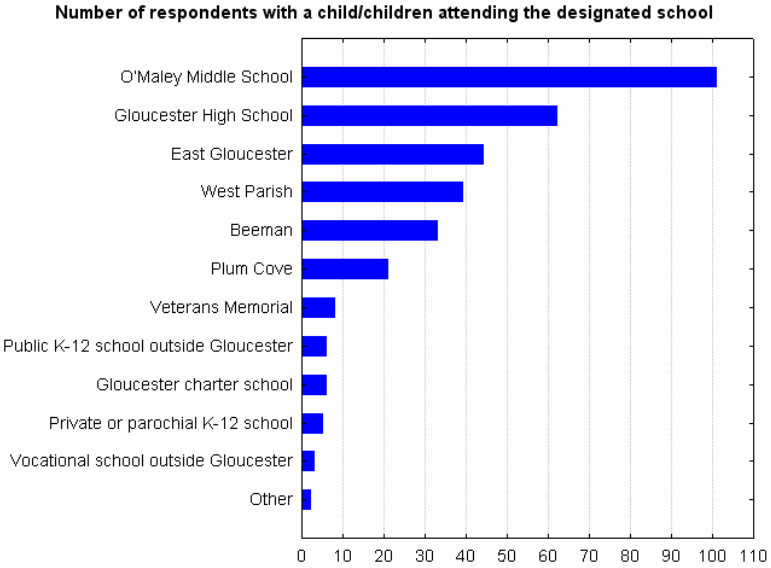
CSS 2011 gives respondents an opportunity to voice their views on an array of issues--academic, social, financial, and cultural--linked to the operation of GPSD.

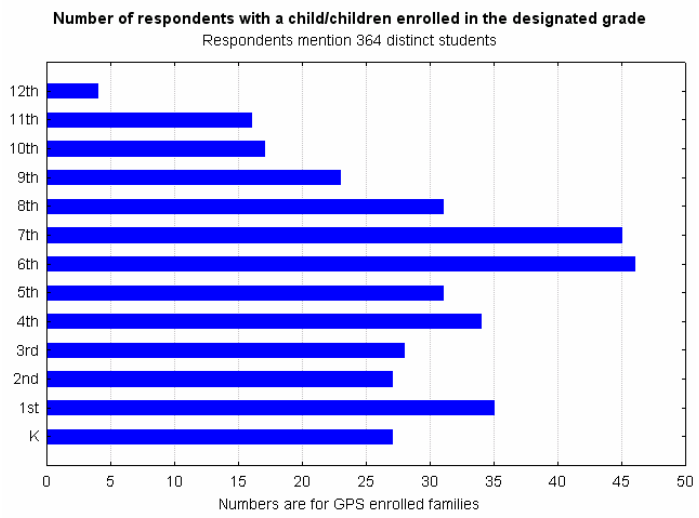
Comparison between staff members (who have first-hand experience of schools) with parents enables us to assess how far differences in experience influence the evaluation of school programs.

[1] Cognigraphics Consulting, a Gloucester-based firm specializing in organizational evaluation, is owned and operated by Dr. Roger Garberg, member of the Gloucester School Committee. Cognigraphics provided the work on a pro bono basis: no public or private funds were used to support the work.

SURVEY SAMPLING: WHO WAS INVITED, WHO RESPONDED?

Invitations to partcipate in the *CSS 2011* were widely distributed. Paper versions of the survey were completed by participants in strategy development focus groups convened at schools during the winter. The survey was also made available on-line via a link on the district web-site. A district all-call was made encouraging parents to visit the district web-site and use the link to access and complete the survey. In addition, the local paper encouraged all Gloucester residents to access the survey. Finally, PTOs at most of the elementary schools and the middle schools sent emails to their member/friends list with an embedded link to the survey.





211 parents with 364 children enrolled in GPS responded. This represents nearly 10% of the estimated 2,222 families who send children to GPS. Observation of the timing of survey completions showed that the PTO-driven direct e-mails were overwhelmingly the most effective participation prompt. Other forms of invitations (e.g., 'all call') were not effective invitations.

Response rate. Response rate is the ratio of respondents divided by the number of effective invitations to participate[2]. It measures the survey 'up-take' among persons who are given a clear opportunity to participate. The rate in this survey is 211 divided by the size of the PTO e-mail lists used as the basis for invitations. Since these lists contain only a portion of the population, the response rate is higher, probably much higher, than 10%--the number representing the portion of the parent population included in the sample.

Implications. The survey represents a statistically adequate sampling of district parents who have shared their e-mail addresses with their PTOs. Other groups (teachers and non-parent community members, high school parents), are under-represented. The most reliable results based on such a sample will be inter-group comparisons between the most adequately sampled groups (parents with students in the elementary schools and middle school).

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[2] "Response rate" should not be confused with the size of the sample as a percentage of the population (10%). The latter number represents the lower bound of the response rate, and equals the response rate only when invitations are sent to every member of the population.

RESPONDENTS' OVERALL EVALUATIONS OF GPS

The *CSS 2011* includes three questions that elicit overall evaluations of the district: i) an item that asks how the respondent's satisfaction with the GPSD has changed since the prior year; ii) an item that asks about overall current satisfaction with GPSD; and iii) an item that asks whether respondents would recommend GPS schools to a neighbor who asked their opinion.

Unsurprisingly, items (ii) and (iii) are strongly correlated with one another ($r=.78$, $p<.001$). That is, the higher the current satisfaction, the stronger the recommendation. Item (i) is also correlated with items (ii) and (iii): low current satisfaction tends to be linked to a a recent decline in satisfaction, and high current satisfaction tends to be linked to a recent increase in satisfaction ($r=.62$ and $.53$, $p<.001$ for items (ii) and (iii) respectively). Most respondents reported no change in overall satisfaction from the prior year. Of those who report a change, slightly more report a change for the better.[3]

Parents' willingness to recommend GPS: Net Promoter Scores

Respondents' indicated whether they would respond with a recommendation for GPS if asked by a neighbor. Response options included: "definitely" recommend, "probably" recommend, "not sure" about recommending, "probably not" recommend , and "definitely not" recommend.

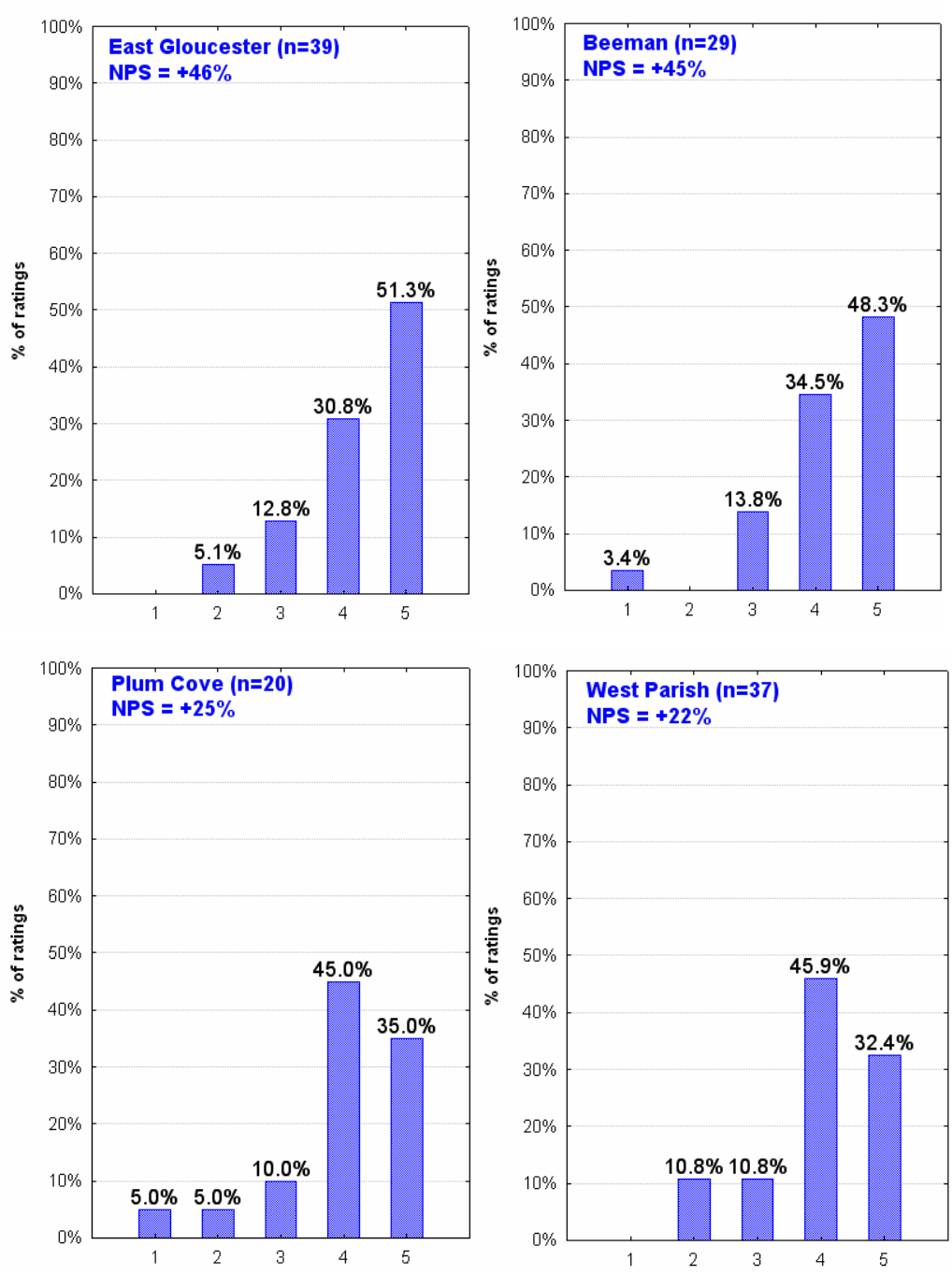
Results from this kind of question are often simplified by calculating a "Net Promoter Score" (NPS) this way:

NPS = % *Promoters* - % *Detractors,*

where % *Promoters* is the percentage of respondents who indicate that they would "definitely" recommend (give a rating of ***5*** to the recommendation question); % d*etractors* is the percentage of respondents who indicate that they would either *probably not* recommend the schools or *definitely not* recommend them. NPS is used in some business organizations to measure success in engaging customers. In that context, any positive NPS scores are usually good, and scores near 50% (such as are found in Beeman, EGS) are considered excellent. (Respondents who give an intermediate rating of recommendation, termed *Passives*, are not counted in the NPS, since they would likely neither encourage or discourage others to join the district.)

All of the four elementary schools show a robustly positive NPS, indicating that the sample of parents from those schools includes a substantial team of advocates for the district (see figures on the following page).

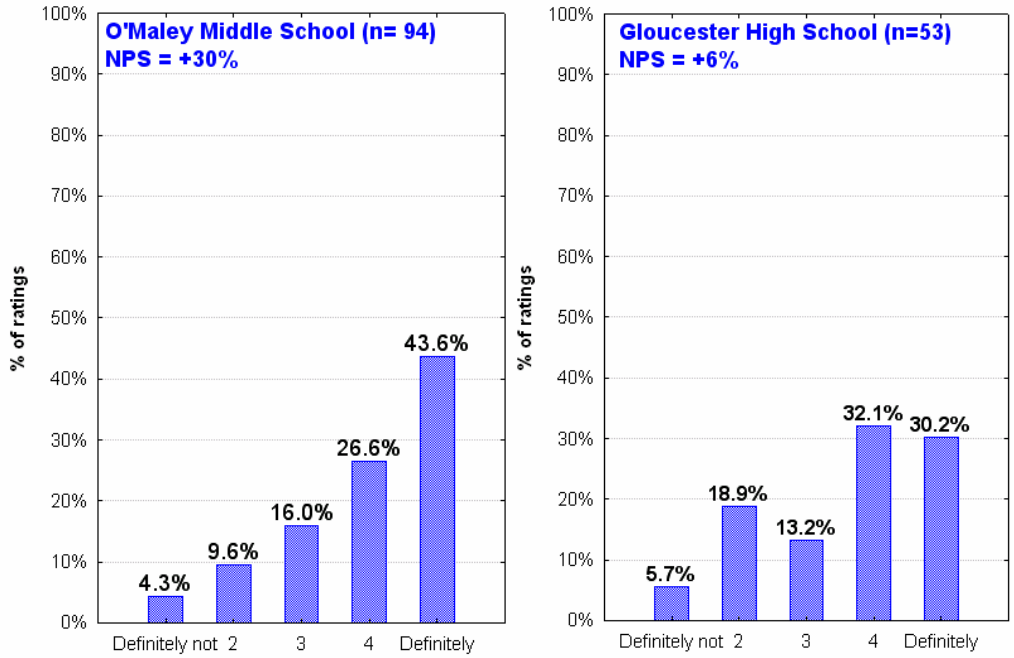
[3] Item (i) was included primarily as a device for dealing with 'telescoping responses': these occur when respondents include experiences outside the temporal scope of the questions. By including one question that asked respondents to compare their current to their previous year's satisfaction, we hoped to reinforce the focus on the respondents' away from older experiences, towards *current* level of satisfaction for all the subsequent survey questions. Pilot testing showed that including this question was an effective way of focusing responses to recent experiences with the district.



Percentages of each recommendation rating among respondents with students enrolled at each school. Responses were scored 1="definitely not" recommend, 2="probably not" recommend, 3="not sure" about recommending, 4="probably" recommend, 5="definitely" recommend. Results are for parents only.

Calculated for each school is the Net Promoter Score (NPS). NPS = % *Promoters* - % *Detractors*. See the text for an explanation of these terms.

GHS and O'Maley. Next, consider the middle and high schools. Recommendation ratings from parents with children at the middle and high schools are shown below.



Just as for the elementary schools, parents in the sample give very strong recommendations to O'Maley Middle School. The high school sample shows a relatively high rate of *Detractors*: nearly 25% of the the sample of GHS parents are *Detractors*. The NPS score is positive, but just barely. Note that the sample contains only a small proportion of the high school parent population whose representativeness is unclear.

Implications. Both middle and the elementary schools enjoy strong communities of *Promoters*, parents who indicate that they would recommend the district schools if asked by a neighbor for their advice. Particularly strong in *Promoters* are EGS and Beeman.

Apparently contrasting results from the high school should be interpreted cautiously owing to the poorly represented high school parent population.

Notice that though the results are tied to specific schools, the recommendation question itself is not: respondents are asked if they'd recommend Gloucester Public Schools *in general* based on their experiences. Thus, strictly speaking, the results for a site do not necessarily implicate that site—it might be that responses for a family enrolled in multiple schools tells more about one school than another.

Net Promoter Scores in othe groups

A majority of the GPS staff represented in this survey sample are *Promoters*: 51.1% indicate they'd definitely recommend the schools to a neighbor (NPS= +49% in this group).

Among persons who indicated they had no connection to the schools (not parents, volunteers, nor staff but unaffiliated respondents), a similar percentage of respondents were promoters (47.8%). Yet NPS for these unaffiliated respondents (+22%) was substantially lower than for staff owing to the presence of a very negative minority (*Detractors* were 26% of this group).

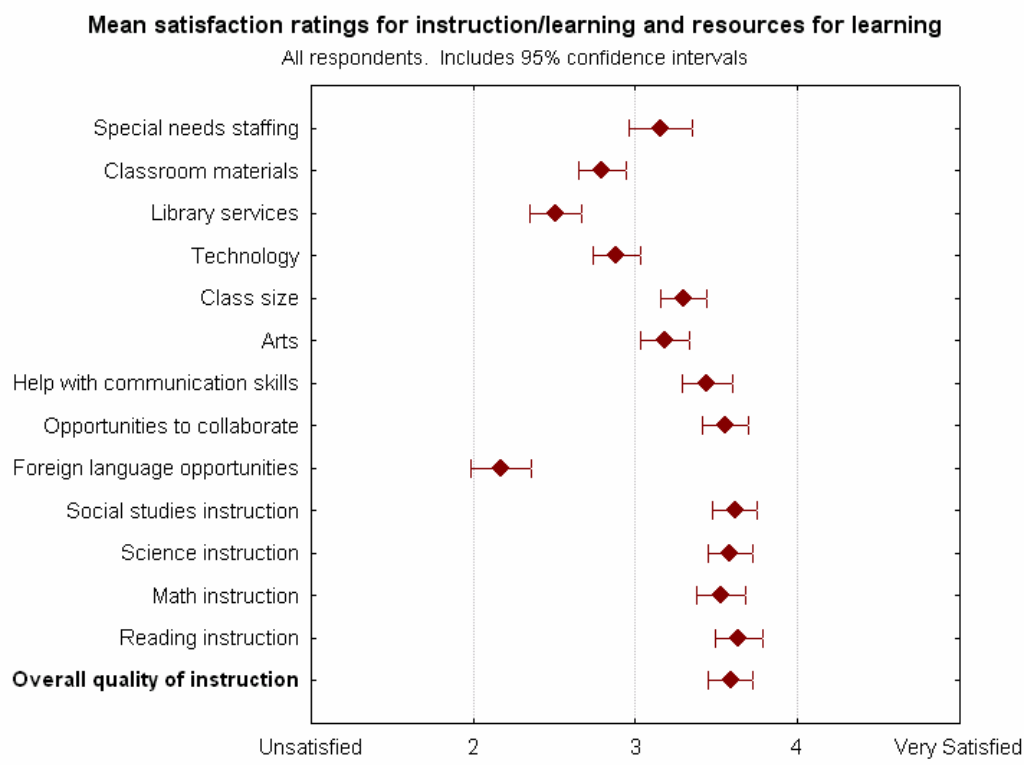
Other groups. 40 respondents indicated that student(s) in their family had either choiced out, graduated, or left GPS for some other reason. Unsurprisingly, this group was among the most disinclined to recommend GPSD. Only 22.5% were *Promoters*, while 44.5% were *Detractors* (NPS = -20%).

Several other groups were weakly represented in the sample: those who had used intra-district choice (n= 16, NPS=+6%), had a student with an Individual Education Plan (n=39, NPS=+3%), participated in Free/Reduced Lunch (n=26, NPS=+35%).

Implications. Staff have an appropriately positive attitude towards the schools they teach in. Results for unaffiliated other special groups are mixed, and, owing to the small samples from these populations, firm descriptions are not possible.

SATISFACTION WITH DIVERSE ASPECTS OF THE SCHOOLS

The figure below displays the satisfaction ratings across all respondents (staff, parents, unaffiliated) for items related to instruction and learning resources. A few items stand out.



The first is that respondents are least satisfied with the availability of foreign language opportunities. This is unsurprising when we recall that the majority of respondents are linked with elementary schools or the middle school where there is currently no foreign language option during the regular school schedule (after school language is currently available at the Middle School).

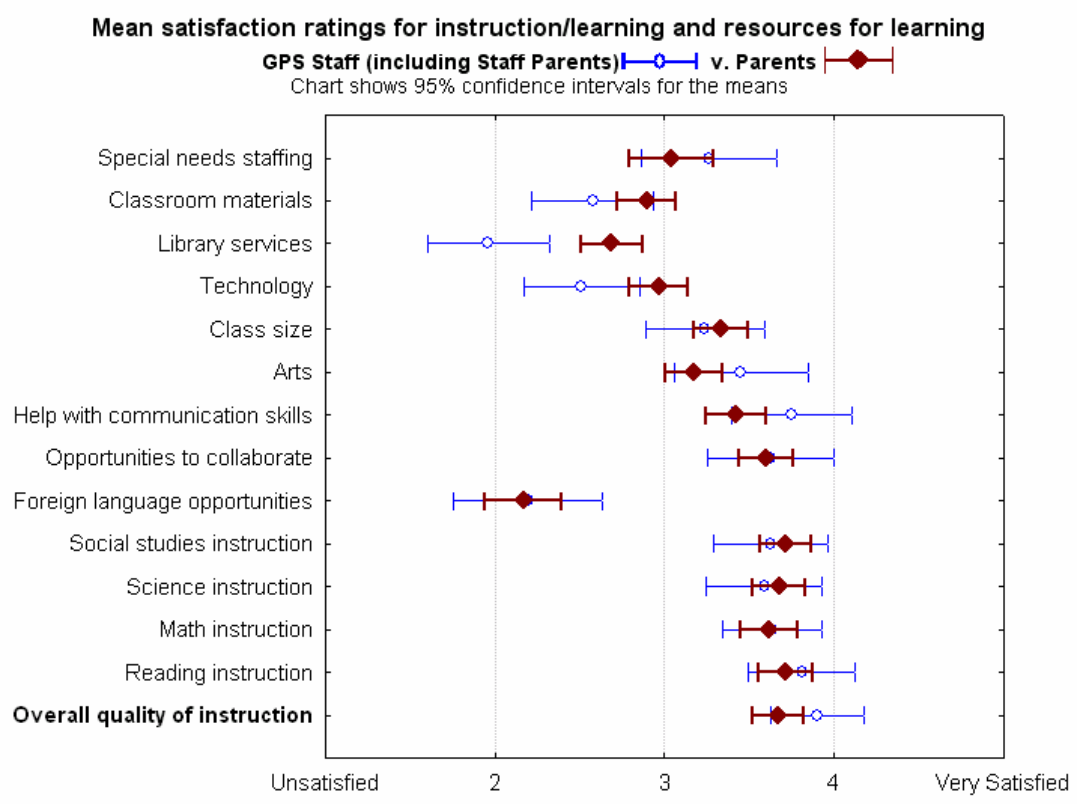
Similarly, the absence of library services are reflected in these data.

Two other items are rated below the mid-point of the satisfaction scale: classroom materials and technology.

Overall quality of instruction is rated on the postive side of the satisfaction scale, as are the measures directly related to overall instruction: reading, math, science, and social studies instruction, along with opportunities for students to collaborate with one another.

Comparison of satisfaction with instruction/resources by groups

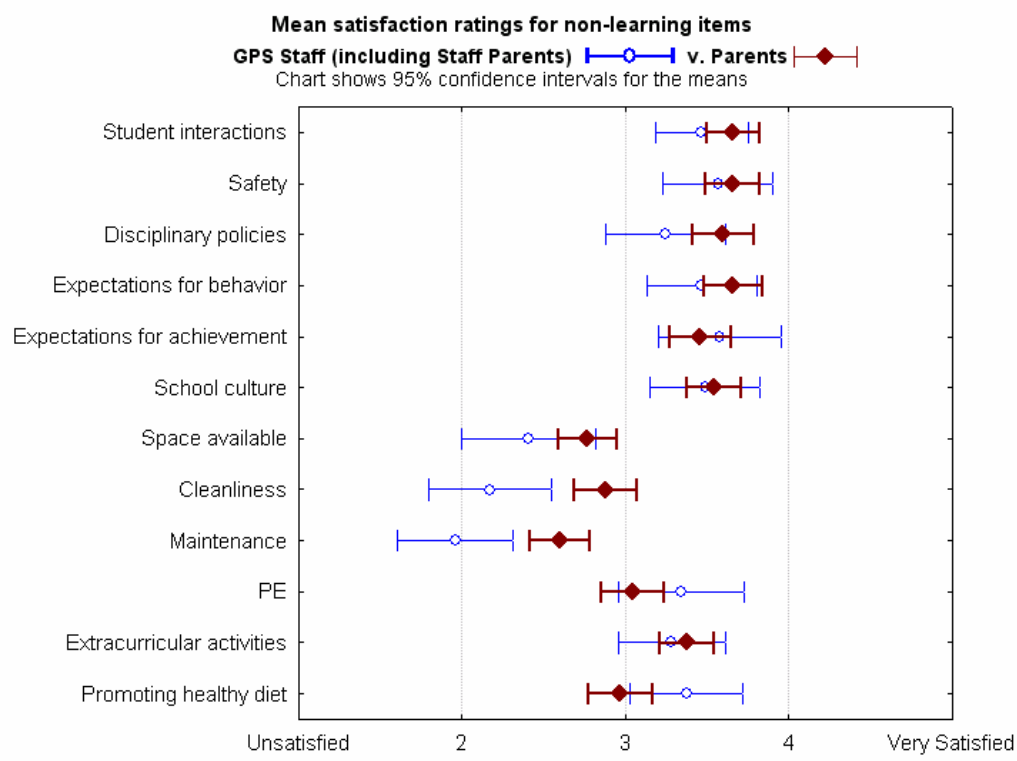
The figure below looks at the same items as rated by staff and parents separately. The figure suggests that staff and parents have very similar satisfactions and dissatisfactions with the district, except in the case of library services and technology. (Note that reliable differences between two points on the Figure are indicated when the error bar for a point does not overlap another point. By this test only *library services* and *technology* are statistically reliable differences.)



Implications. In general, sampled parents and staff share the same level and pattern of satisfaction with instruction/learning in the district. Exceptions are library services and technology, for which there is a reliable gap between the two groups, with teachers expressing reliably lower levels of satisfaction.

Comparison of satisfaction with non-learning items by groups

The previous section discussed satisfaction with items linked to instruction and learning resources.



The figure above displays the average satisfaction ratings for all other items—for staff v. parents.

Once again, most items are rated on average in the satisfied end of the scale. Students' interaction with teachers are rated highest of all (though not significantly higher than the parents' satisfaction with their own interactions with teachers).

A distinctly poor group of items stands out—respondents show lower levels of satisfation with aspects of facilities, including maintenance, cleanliness, and space availability. The lower satisfaction occurs in both staff and parent groups, but the staff group is reliably less satisfied on the items of cleanliness and maintenance.

Two other items are given mixed reviews: PE programming and promotion of a healthy diet.

With the exception of the two facilities items, teachers and parents differ little in their ratings of the items—just as was the case for the learning/resources items. Sampled parents are less satisfied than are teachers with programming for healthy eating.

Implications. Teachers spend their working life in the buildings—and are likely more oppressed by deficiencies than are parents. Parents may feel that their children's diet is out of parental control when their child is at school. This loss of control may contribute to their frustration with the food service offerings. In addition, complaints about school lunches may be directed more at parents than teachers.

Understanding relations between satisfaction ratings and recommendations

The *CSS 2011* was designed to use multiple indicators of key concepts/concerns. The problem for survey analysis is to identify the concerns, or factors, that underly responses to the multiple indicators. One technique for identifying these underlying factors is factor analysis.

A factor analysis of parent ratings of the 33 detailed satisfaction items of the CSS 2011 revealed four underlying concepts, or factors, shared among parents. The factors involve 23 of the 33 satisfaction items as summarized in the table.

The factors are listed in order of 'importance', namely, the proportion of variance in satisfaction ratings that is linked to the factor. In this sense, the most important factor is QUALITY OF SCHOOL CULTURE & COMMUNICATIONS. The second factor is FACILITIES, followed by INSTRUCTIONAL QUALITY, and then PROMOTING HEALTH AND ENRICHMENT.

Further analysis showed that 2 of these factors—QUALITY OF SCHOOL CULTURE & COMMUNICATIONS and INSTRUCTIONAL QUALITY—were key influences on respondents recommendations. By simply adding together the scores of respondents on the items listed for these two factors, we can create two 'scales' that together account for half of the variance in respondents' recommendations[4].

Factors of Satisfaction Ratings

Factor names are shown in capitals. Items comprising the factor is listed below its name.

Factor 1* B=.48	QUALITY OF SCHOOL CULTURE & COMMUNICATIONS ° My interactions with teachers ° My student's interactions with teachers ° My student's interactions with administration ° My interactions with administration ° School culture ° Expectations for achievement ° Expectations for behavior ° Disciplinary policy ° Safety ° Student interactions ° My opportunities to participate ° Teacher's communications ° Principal's communications
Factor 2	FACILITIES ° Cleanliness ° Maintenance
Factor 3* B=.27	INSTRUCTIONAL QUALITY ° Reading instruction ° Math instruction ° Science instruction ° Social studies instruction ° Opportunities for students to collaborate
Factor 4	PROMOTING HEALTH AND ENRICHMENT ° Promoting a healthy diet ° Extra-curricular activities ° Physical education

* these factors 'drive' recommendations, i.e., scales based on these factors correlate with recommendations

4 The link between the factors and respondents' willingness to recommend was evaluated by regressing recommendation ratings on the four factors. This regression analysis revealed that two of the factors—SCHOOL CULTURE & COMMUNICATIONS along with INSTRUCTIONAL QUALITY— were linked to recommendation (R^2= .495, F(2, 189)=92.65, p<.0001). Beta for Factor 1 =0.48; Beta for Factor 3 = 0.27.

The items making up these factors were evaluated for scale reliability—to ensure that each item in the scale contributes to the measurement of the factor. Reliability was excellent (Cronbach's α = .97 and .91 for Factors 1 and 3, respectively, indicating excellent reliability among items in these two scales).

Implications. This analysis suggests that two concepts of schools inform the perceptions of sampled parents who rated GPS schools. The first of these, SCHOOL CULTURE & COMMUNICATIONS, yields a highly reliable scale that is stronlgy predictive of willingness to recommend the GPSD. INSTRUCTIONAL QUALITY yields a second reliable scale that also contributes to predicting recommendations, but to a smaller extent. Both of these scales combine to account for approximately half of the variance in recommendations. Thus, the data suggest that a promising route to improved willingness on the part of parents to recommend the schools is to focus improvements on items comprising Factors 1 and 3 in the table. At the same time, considerable variance in ratings remains unaccounted for by the factors, suggesting that other issues play a significant role in respondents' willingness to recommend.

OPEN-ENDED RESPONSES: TREE OF DELIGHTS

One of the open-ended questions used in both focus groups and the satisfaction survey asked participants/respondents,

> *What could the school district do that would delight you? Tell us about your own vision about how to improve teaching and learning in a time of scarce resources*.

Responses were segmented and coded according to the themes they represented, allowing for multiple segments per respondent. The result was the "Tree of Delights", a heirarchical list of 63 themes (cf. Table next page). This tree also served as the starting point for coding response segments to several other open-ended questions posed in the survey.

There were 888 codes assigned to segments of the responses to this question (a single respondent's response to this question commonly contained several coded segments, i.e., they talked about several different themes).

Among the high-level themes were those concerning aspects of the INSTRUCTIONAL CORE. There were 253 segments coded under this heading (a single verbatim was commonly coded under a number of different headings). This theme comprised CURRICULUM (142 segmets), STUDENT LEARNING, ENGAGEMENT, AND ATTITUDES (75 segments), and TEACHING QUALITY (36 segments).

Appendix B shows the segments classified by NPS of responder and for GHS and O'Maley parents. Reading the segments in the context of the NPS classifications enables you to understand what are the major themes of concern to *Promoters,* to *Passives,* and to *Detractors* in this sample of respondents.

The Delight Tree

Themes found in responses to open ended question: 'what would delight you'?

Numbers in parenthesis are count of verbatim response segments coded under the theme.

- ADMINISTRATION (***81***)
  - Equity (8)
  - Overall administrative (14)
  - Policies and Governance (8)
  - Professional development (2)
  - Promote teacher autonomy (8)
  - Staff evaluation and accountability (16)
  - Strategic leadership (21)
  - Support for teachers (4)
- CHARTER AND CHOICE (22)
- COMMUNITY ENGAGEMENT (***103***)
  - Collaboration across district (5)
  - Communications (34)
  - Community resources (9)
  - External organizations (6)
  - Neighborhood schools (1)
  - Parental engagement (27)
  - Public relations (21)
- DISTRICT FINANCIAL MANAGEMENT (***63***)
  - Adequacy of budget (35)
  - Administrative cost (1)
  - Controlling program costs (5)
  - Revenue generation (10)
  - User fees (11)
  - Zero-order budgeting (1)
- INSTRUCTIONAL CORE (***253***)
  - Curriculum (***142***)
    - Challenge (3)
    - Data driven (1)
    - Divergent thinking (2)
    - ELL (2)
    - Enrichment programming (10)
    - Expressive skills, Arts (15)
    - Foreign language (29)
    - Job skills (1)
    - Math (5)
    - MCAS (14)
    - Music (3)
    - PE & athletics (21)
    - Project-based learning (6)
    - Reading (10)
    - Rigor (11)
    - STEM (7)
    - Vocational programming (2)
  - Student learning, engagement, attitudes (***75***)
    - Student academic attitudes (13)
    - Expecations for learning (25)
    - High achievers (16)
    - Learning styles (6)
    - Middle-rank achievers (4)
    - Special needs learners(11)
  - Teaching quality (***36***)
    - Homework (10)
    - Complaints about teaching (13)
    - Praise for teaching (13)
- FACILITIES (***100***)
  - Adequate facilities (14)
  - Facilities maintenance (58)
  - Facilities planning, construction, consolidation (28)
- SITE-FOCUSED EVALUATIONS (***88***)
  - Elementary schools (***28***)
    - EGS (5)
    - WP (9)
    - Beeman (6)
    - Plum Cove (4)
    - Veterans' (4)
  - Middle school (32)
  - High School (16)
  - Pre-school (1)
  - District (11)
- LEARNING RESOURCES (***139***)
  - Class size & staffing adequacy (21)
  - Discipline (22)
  - Field trips (2)
  - Food service (6)
  - Guidance (4)
  - Libraries (23)
  - Multiage (2)
  - Regionalization(1)
  - Reports on student progress (7)
  - Schedule (20)
  - Social/emotional environment (3)
  - Special facilities (1)
  - Teacher compensation (5)
  - Technology (11)
  - Tutoring & remedial programming (11)

CSS 2011: DISCUSSION & CONCLUSIONS

The DESE recently distributed a "Parent Involvement Survey" state-wide that appears designed to cover much the same ground as the *CSS 2011*. The DESE survey asks respondents about opportunities for parental involvement, communications with teachers, the availability of effective communication channels, expectations for achievement, and information about the behavior and discipline policies of the school. Comparison between these topics and Factor 1 (QUALITY OF SCHOOL CULTURE & COMMUNICATIONS) of the *CSS 2011* show that our analysis confirms the salience of the topics covered in the DESE survey. In other words, the DESE successfully identified the items that we have established here as important drivers of parent recommenadations of a public school district. It is good to see that the DESE can ask the right questions.

Analysis of the CSS 2011 satisfaction measures suggests that there are four important factors that underlying respondents ratings. In order of their importance for explaining variance in the satisfaction ratings, these factors are: 1) QUALITY OF SCHOOL CULTURE & COMMUNICATIONS 2) FACILITIES, 3) INSTRUCTIONAL QUALITY, AND 4) PROMOTING HEALTH AND ENRICHMENT. Of these factors, the first and third are linked directly with respondents' willingness to recommend the district. The other factors—FACILITIES and PROMOTING HEALTH AND ENRICHMENT—,while important for explaining common variance in satisfaction ratings, are less not clearly correlated with recommendations.

Strategically, improvements in respondent scores on Factors 1 and 3 would apparently be key to earning higher levels of recommendations among parents and other stakeholders.