

NEEDHAM PUBLIC SCHOOLS
Needham, Massachusetts

TO: Paul Richards
FROM: George Johnson
DATE: September 28, 2007
RE: Class of 2006 Alumni Survey

The following is an analysis of the results from the recent alumni survey for the Class of 2006. As it is now our practice to administer the survey biennially; I shall also provide comparison data, where appropriate, for the classes of 2000, 2002, and 2004. These surveys are sent to graduates one year after leaving the High School.

Surveys were mailed to all 317 members of the class of 2006. Of those, 13 were returned as undeliverable. The response rate from the remaining students was 42.8% or 130 students. As in past years, girls were more likely to respond than boys – 60.2% versus 39.2%. Of the respondents, 91.5% were attending a four-year college; and another 2% were at a two-year school. An extremely large percentage of the students said that they had been either Accelerated (62.2%) or Honors (35.4%) level students while at Needham High School. Only 2.4% of the respondents reported that they were Standard level students. Because of the small group of Standard level students, it is impossible to offer any reliable analysis of disaggregated data by level. Another 3% reported that they did not go on to college after high school. Because this number is also much too small to provide reliable data, I am omitting any analysis of their responses as a group. Their responses are included in all of the aggregate data except for those questions relating to preparation for post-secondary education.

As with any mailed questionnaire, one cannot assume that non-response is randomly distributed throughout the group. Studies have shown that respondents tend to be better students, more conscientious, and more interested in the topics involved in the questionnaire. However, a response rate over 40% is considered very good; and the similarity of responses among all four surveyed classes tends to support the reliability of the results.

Issues Relating to Choice and Preparation for Post-Secondary Experiences

We asked our graduates the primary reason for selecting their college or university. Below are the answers for the last four graduating classes:

Class of 2000

Academic Reputation (41.0%)
Specific Major Offered (14.8%)
Location (14.2%)
Cost (9.3%)

Class of 2002

Academic Reputation (40.9%)
Specific Major Offered (21.5%)
Cost (10.8%)
Location (9.1%)

Class of 2004

Academic Reputation (41.2%)
Location (19.6%)
Specific Major Offered (16.7%)
Cost (10.8%)

Class of 2006

Academic Reputation (44.3%)
Location (16.4%)
Specific Major Offered (13.9%)
Size (6.6%)

For the first time since the survey was initiated, cost was not one of the top four reasons given for choosing a college. Only five students or 4.1% gave affordability as a selection criteria. Academic Reputation is consistently listed as the top reason by at least two out of five graduates.

An important segment of the survey involves determining the specific strengths and weaknesses of the High School program as perceived by these recent graduates. They are asked about their general preparation in a number of important areas:

% of Student Who Felt Prepared in Each Study Area

Area	Class of '00	'02	'04	'06
Reading Level	92.2	94.5	98.0	95.9
Written Assignments	90.4	95.7	94.1	94.2
Computer Usage	84.8	86.0	92.9	90.9
Research Skills	91.0	88.8	86.9	85.1
Study Demands	89.5	85.5	85.1	82.6
Mathematics	88.8	86.2	77.8	82.1

As in previous survey results, a very high percentage of Needham High School graduates felt prepared to handle the demands of their college programs. Literacy skills (reading and writing) continued to be the highest rated areas for college preparation. Almost all of the areas were similar to the responses for the Class of '04; however, there was a slight trend upward in mathematics after a dip from previous results in 2004.

The survey also asked the graduates whether or not they had received advanced placement credit or had been required to take remedial courses in colleges.

% in College Advanced or Remedial Placements

	Class of '00	'02	'04	'06
Advanced Placements	60.9	55.6	48.0	53.3
Remedial English	22.1	24.1	12.0	16.7
Remedial Math	15.7	16.7	13.0	14.6

Over fifty-three percent of these Needham High School graduates received advanced placement at college. Of that group 70.8% indicated that the advanced placement resulted from AP test scores, 20.0% from college placement tests, and the remainder from SAT's or other means. The percentage is up from 2004 but does not reach the high of 2000. The percentage of students required to take remedial English courses rose slightly from the low point in 2004. The percentage required to take remedial math was slightly higher than 2004.

The questionnaire asked students to estimate the level of debt they personally anticipate when they graduate from college. There is a national trend of more students incurring great debt to pay for their college education. In Needham, about 2 in 5 anticipate no personal debt while 1 in 5 expect their debt to exceed \$25,000. Those students expecting significant debt is the highest percentage since the survey was initiated.

% Anticipating Personal Debt

Class of:	Anticipating No Debt	Anticipating Over \$25,000 in Debt
'00	41.9%	9.1%
'02	42.3%	14.1%
'04	54.5%	12.1%
'06	43.1%	19.8%

For the next areas of the survey, respondents were asked to rate various services and factors on a scale from excellent (5) to unsatisfactory (1). The following rating guidelines are given to help interpret the data:

Rating	Interpretation
Over 4.00	Exceptionally Strong
3.80-3.99	Very Strong
3.60-3.79	Strong
3.40-3.59	Neutral
3.00-3.39	Weak
2.50-2.99	Very Weak
Below 2.50	Exceptionally Weak

When comparing scores, the survey designers consider .2 significant when analyzing changes or differences.

Quality of Preparation for Future Responsibilities

The graduates were asked to rate their level of preparedness in certain areas.

Average Rating for Level of Preparedness

Area	Class of '00	'02	'04	'06
Accept Responsibility	3.98	4.03	4.02	4.05
Treat Others with Respect	3.92	3.93	3.96	4.05
Think Creatively	4.00	3.92	3.81	3.89
Make Positive Wellness Decisions	3.91	3.87	3.61	3.87
Appreciate Diversity	3.38	3.37	3.58	3.62

The first four categories are in the Very Strong to Exceptionally Strong range. There was also a significant increase in the rate for making positive wellness decision. Appreciating diversity continues to be the lowest score but ranks in the Strong range for the first time.

Quality of Learning Skills

The four graduating classes have been asked to rate the quality of instruction for key skill areas.

Average Rating for Quality of Instruction

Area	Class of '00	'02	'04	'06
Reading Skills	4.20	4.19	4.21	4.24
Writing Skills	4.23	4.16	4.22	4.22
Critical Thinking Skills	4.11	4.02	3.91	4.22
Listening Skills	3.97	4.01	3.97	4.09
Teamwork Skills	4.03	4.12	4.02	4.07
Problem Solving Skills	3.99	3.99	4.01	4.01
Research Skills	4.10	3.93	3.97	3.98
Math Skills	3.86	3.87	3.71	3.94
Grammar Skills	3.76	3.79	3.77	3.92
Study Skills	4.01	3.83	3.69	3.91
Science Skills	3.83	3.82	3.76	3.78
Technology Skills	3.42	3.48	3.52	3.67
Public Speaking Skills	3.57	3.61	3.50	3.63
Appreciation of the Arts	3.61	3.51	3.52	3.59
Foreign Language Skills	3.38	3.09	3.01	3.45

Ten out of fifteen skill areas are rated Exceptionally or Very Strong. Science, Technology, and Public Speaking were rated Strong; while Appreciation of the Arts and Foreign Language fell in the Neutral range. None of the areas showed a decrease since the survey was last administered to the Class of 2004, and four skill areas (Critical Thinking, Math, Study Skills, and Foreign Language) had significant increases.

Average Rating for Subject Areas

Next students were asked to rate the eleven primary subject areas at Needham High School. As in other parts of the survey, a comparison is made with the Classes of '00, '02, and '04.

Average Ratings for High School Subject Areas

Subject	Class of '00	'02	'04	'06
English	4.34	4.19	4.20	4.35
Resource Room/PLC	4.44	4.10	4.32	4.18
Social Studies	4.05	4.04	3.98	4.18
Mathematics	3.82	3.93	3.90	4.02
Art	3.81	3.75	3.81	4.02
Science	4.03	3.87	3.79	3.90
Health Education	3.62	3.55	3.41	3.83
Physical Education	3.72	3.68	3.70	3.81
Music	3.88	3.72	3.66	3.69
Media/Technology	3.28	3.86	3.71	3.68
Foreign Languages	3.28	3.02	3.21	3.51
Average	3.89	3.79	3.79	3.92

These ratings tend to confirm the skill areas scores discussed above. English continues to be the highest rated academic subject, and 8 of 11 subjects fell into the Very or Exceptionally Strong ranges. Only one area, Foreign Language was below the Strong range; however, the 3.51 rating was significantly higher than for any of the previous surveys. The average for all of the subject areas – 3.92 – is the highest ever and falls in the Very Strong range.

Topics Requiring More Emphasis

The questionnaire asked a number of questions about twenty-one other areas of school experience and preparation. These issues do not necessarily relate to specific subjects but are important for the general education and development of our students. The format of the question asks if more emphasis should be given to the area, not if it should be taught. The chart below tells the percentage of students saying that there should be more emphasis.

% Indicating More Emphasis Needed

Area	Class of '00	'02	'04	'06
Career Exploration	55.6	52.8	47.6	64.3
Leadership Development	26.6	35.0	32.4	52.7
Study Skills	25.8	29.3	29.5	48.1
Lifelong Learning	19.4	15.4	18.1	44.2
Research Skills	21.8	26.8	21.0	42.6
Self Discipline	22.6	24.4	19.0	38.6
Computer Skills	58.9	39.0	22.9	36.4
Environmental Education	19.4	21.1	15.2	36.4
Independent Projects	20.2	33.3	25.7	35.7
Consumer Education	16.1	24.4	18.1	35.7
Creativity	13.7	27.6	22.9	34.1
Understanding Others	24.2	15.4	11.4	31.8
Nutrition & Diet	11.3	13.8	10.5	29.5
Class Participation	8.9	16.3	10.5	28.7
Community Service	12.1	12.2	7.6	25.6
Homework	7.3	8.9	4.8	24.8
Physical Fitness	5.6	11.4	6.7	23.3
Citizenship	12.1	9.8	7.6	22.5
Family Living/Parenting	12.9	12.2	6.7	21.7
Sex Education	9.7	13.0	8.6	20.9
Drug & Alcohol Education	5.6	7.3	4.8	17.1

The Class of '06 appears to want more of everything! Every one of the areas increased: Sex Education and Drug and Alcohol Education had the smallest increases (12.3 percentage points), while Research Skills had the largest (21.6). The top three areas – Career Exploration, Leadership Development, and Study Skills – were also the leading areas identified by the Class of '04.

Guidance Services

The questionnaire asked students to rate the services provided by the High School guidance counselors.

Average Rating for Guidance Functions

Area	Class of '00	'02	'04	'06
Availability	3.61	3.89	4.08	4.09
College Planning	3.31	3.76	3.76	3.99
Schedule Adjustment Services	4.01	3.83	4.10	3.97
Course Planning	3.74	4.05	3.97	3.86
Personal Problems	3.23	4.29	3.45	3.57
Academic Problems	3.85	3.68	3.64	3.52
Career & Job Resources	2.82	3.27	3.25	3.48
Career Planning	2.79	3.17	3.40	3.41
Average	3.42	3.79	3.91	3.74

The overall average for Guidance Services fell in the Strong range. While the average declined from 2004, the difference is not considered, but is approaching, significance. The only significant changes were up: College Planning improved by .23, and the average for Career & Job Resources was also .23 points higher. One half of the functions fell in the Strong to Exceptionally Strong range, while four of the eight were in the Neutral range.

Media Center

The survey asked graduates to rate topics related to the Media Center.

Average Rating for Media Center Functions

Area	Class of '00	'02	'04	'06
Print Resources	3.97	3.65	3.85	3.95
Technology Resources	3.93	3.65	3.82	3.88
Study Climate	3.30	3.23	3.52	3.82
Average	3.78	3.53	3.77	3.88

The Class of '06 gave an average rating in the Very Strong range for the Media Center, and the Study Climate area significantly improved. It is important to note that the Class of '06 was graduated prior to the opening of the new Media Center.

Co-Curricular Activities

The graduates rated their co-curricular activities.

Average Rating for Co-Curricular Activities

Area	Class of '00	'02	'04	'06
Athletics	4.39	4.41	4.26	4.44
Drama	4.48	3.90	4.17	4.14
Music	4.13	4.29	4.04	4.00
Clubs	3.99	3.90	3.92	4.10
Publications	4.08	3.11	3.60	3.74
Student Government	4.10	3.94	3.22	3.67

All of the co-curricular areas were rated in the Strong to Exceptionally Strong range; indeed, students gave their highest ratings on the entire survey to Athletics. Student government, which had dipped significantly with the Class of '04, improved but did not reach the previous highs with the classes of '00 and '02.

Of the students who participated in a co-curricular activity, 63.1% said that it had had a positive effect on their academic performance. Only 2.5% indicated that it had a negative impact.

In this section, students were also asked about working during their years at the High School. 59.7% said that they had worked a part-time job during their senior year at Needham High School. Of this group, 32.4% said that they worked more than 10 hours per week. Of those who worked, 7.9% said that they would have done better academically if they had not worked, and 14.7% said that working interfered with their ability to participate in extracurricular activities.

Issues and Problems Associated with School

The chart below represents the percentage of students who indicated that the issues listed had been a problem while they were in high school.

% Indicating Area Was a Problem in High School

Area	Class of '00	'02	'04	'06
Academic Pressure	38.7	44.7	49.5	64.1
Condition of Building	33.9	36.6	49.5	42.2
Social Acceptance	26.6	25.2	33.3	40.6
Drug Use	23.4	24.4	30.5	32.0
Cheating	23.9	30.1	45.7	28.1
Alcohol Use	29.0	20.3	34.3	28.1
Class Size	26.6	10.6	14.3	23.6
Lack of Student Morale	31.5	28.5	39.0	22.7
Smoking	21.0	28.5	26.7	20.3
Harassment	10.5	10.6	10.5	18.1
Respect by Administration	12.4	14.3	14.3	9.4
Respect by Students	9.7	13.8	5.9	7.8
Respect by Teachers	5.0	9.5	2.9	7.8
School Safety	2.4	0.8	1.0	5.5
Respect by Support Staff	5.6	3.6	1.0	4.0

Academic Pressure topped the list and was listed by a significant majority of the graduates as a problem. The Condition of the Building ranked second in the problem list followed by Social Acceptance. Cheating dropped in the rankings from third to fifth as a problem as the percentage of students listing it as a problem declined from 45.7% to 28.1%. Smaller percentages of students also listed Alcohol Use, Smoking, and Student Morale as problems; while there were significant increases in the percentages of students who listed Class Size and Harassment as problems.

Summary and Conclusion

The overall rating for Needham High School falls in the Very Strong range; consequently, we can feel confident in stating that most graduates have extremely positive feelings about their educational experiences at Needham High School. Every year, what tops the ratings for our students are the High School's core missions - classroom learning and co-curricular experiences.

The overall satisfaction rate for graduates continues to be quite high, as have the ratings in previous surveys:

Class of 2000	4.02
Class of 2002	4.05
Class of 2004	3.97
Class of 2006	3.98

It is also important to look beyond averages to understand the breakdown among the students. When asked to rate the overall quality of Needham High School, the graduates responded as follows:

29.1%	Very Favorable
51.2%	Generally Positive
11.8%	Neutral
3.9%	Generally Negative
3.9%	Strongly Negative

There was a decline in the percentage of Generally or Strongly Negative responses from the Class of 2006; however, the percentage is higher than the Classes of 2002 or 2004. This percentage should be carefully monitored.

Class of '06	7.8%
Class of '04	8.7%
Class of '02	5.4%
Class of '00	3.9%

The questionnaire responses raise a number of areas for study or concern. Most of these issues have already been identified by the High School administration, and action plans are at various stages of implementation. Obviously, one of the greatest concerns from the Class of '06, Condition of the Building, is being addressed by the building of a new and renovated High School that is in progress. However, there are other areas that require further study and reaction:

- 1) Academic pressure is the top concern among our graduates. A Task Force has been created at the High School to study stress and to develop recommendations for addressing this issue. The Task Force should also look at the area of Social Acceptance, another problem area identified by over 40% of the students.
- 2) The rate of students listing harassment as a problem increased from 10.5% to 18.1%. The High School administration and staff should examine this issue to determine possible reasons for the trend and to take steps to reduce this number.
- 3) Along with other data, this survey indicates that drug and alcohol use is a problem among our high school students. The school system was fortunate to receive a grant from the MetroWest Health Care Foundation to develop a community-wide response to this issue. Much work has already been done in this area, but it remains a significant problem for our students.
- 4) The Class of '06 gave lower ratings to Guidance than most other areas. It will be important for the High School to explore further the reasons for this rating.