

NEEDHAM PUBLIC SCHOOLS
Needham, Massachusetts

TO: Paul Richards
FROM: George Johnson
DATE: September 30, 2005
RE: Class of 2004 Alumni Survey

The following is an analysis of the results from the recent alumni survey for the Class of 2004. In previous years, we have surveyed both one-year and five-year graduates; however, a decision was made two years ago to survey five-year graduates every three years instead of every year. The next five-year survey will be in 2006. We now have data from one-year alumni for six classes (1999 – 2004). By looking at all of the survey results, we can identify trend data.

Surveys were mailed to all 287 members of the class of 2004. Of those, 25 were returned as undeliverable. The response rate from the remaining 262 students was 40.1% or 105 students. As in past years, girls were more likely to respond than boys – 54.3% versus 45.7%. Of the respondents, 96.2% 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 (50.0%) or Honors (48.1%) level students while at Needham High School. Only 1.9% of the respondents said that they had been 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.

A very large majority of Needham students continue their education after high school. The questionnaire was sent to all 2004 graduates, but only four students who did not go on to college responded to the survey. Because this number is 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 five 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 six graduating classes:

Class of 1999

Academic Reputation (43.1%)
Location (14.4%)
Specific Major Offered (12.7%)
Cost (9.3%)

Class of 2000

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

Class of 2001

Academic Reputation (45.1%)
Specific Major Offered (21.0%)
Cost (10.5%)
Location (10.4%)

Class of 2002

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

Class of 2003

Academic Reputation (42.6%)
Specific Major Offered (14.8%)
Location (13.9%)
Cost (8.3%)

Class of 2004

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

A number of other reasons (size, advice from guidance, etc.) were given, but none represented more than 2% of the population. It is obvious that the four reasons listed above are the primary considerations for choosing post-secondary institutions, but Academic Reputation is consistently listed as the top reason by at least two out of five graduates.

Below is a chart listing the percentages of graduates who indicated that they felt adequately prepared for various areas of college demand.

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Reading Level	93.3	92.2	97.2	94.5	96.3	94.7	98.0
Written Assignments	89.6	90.4	92.7	95.7	93.5	92.4	94.1
Computer Usage	86.7	84.8	80.4	86.0	79.2	83.4	92.9
Research Skills	86.8	91.0	87.0	88.8	87.7	88.3	86.9
Study Demands	85.8	89.5	89.8	85.5	90.7	88.3	85.1
Mathematics	84.7	88.8	87.6	86.2	82.4	85.9	77.8

As in previous years, 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. Four out of six areas were very similar to the average of the five previous years. Mathematics was over 8 percentage points lower, and Computer Usage was 9.5 points higher.

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.

Class of	% in Advanced Placements	% in Remedial English	% in Remedial Math
'99	67.9	14.1	7.1
'00	60.9	22.1	15.7
'01	58.1	23.4	22.1
'02	55.6	24.1	16.7
'03	60.2	16.2	21.4
'04	48.0	12.0	13.0

Forty-eight percent of these Needham High School graduates received advanced placement at college. Of that group 59.2% indicated that the advanced placement resulted from AP test scores, 24.5% from college placement tests, and the remainder from SAT's or other means. This percentage is the lowest since the survey has been used. The percentage of students required to take remedial English courses declined for the second year in a row after rising for the previous three years. This percentage (12.0) was the lowest since the inception of the survey. The percentage of students required to take remedial math also declined and was the lowest percentage since 1999.

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; however, in Needham, it appears that the percentage of students incurring no debt is becoming larger. On the other hand, the percentage of students anticipating a debt of over \$25,000 seems to be trending upward.

Class of:	Percentage Anticipating No Debt	Percentage Anticipating Over \$25,000
'99	42.0%	9.0%
'00	41.9%	9.1%
'01	43.6%	11.1%
'02	42.3%	14.1%
'03	46.4%	11.0%
'04	54.5%	12.1%

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). These rating guidelines are given to help interpret the data.

<u>Rating</u>	<u>Interpretation</u>
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.

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Accept Responsibility	3.97	3.98	4.01	4.03	4.07	4.01	4.02
Treat Others with Respect	3.87	3.92	4.03	3.93	4.01	3.93	3.96
Think Creatively	4.00	4.00	3.85	3.92	4.13	3.98	3.81
Make Positive Wellness Decisions	3.95	3.91	3.82	3.87	3.83	3.88	3.61
Appreciate Diversity	3.37	3.38	3.57	3.37	3.47	3.43	3.58

The first three categories are in the Very Strong to Exceptionally Strong range. Making Wellness Decisions fell significantly below the 5-year average but remains in the Strong range. The preparation for appreciating diversity continues to be rated in the Neutral range by graduates.

Quality of Learning Skills

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

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Writing Skills	4.15	4.23	4.14	4.16	4.31	4.20	4.22
Reading Skills	4.07	4.20	4.20	4.19	4.32	4.20	4.21
Teamwork Skills	4.12	4.03	4.04	4.12	4.19	4.10	4.02
Problem Solving Skills	4.05	3.99	3.97	3.99	4.16	4.03	4.01
Listening Skills	3.90	3.97	4.04	4.01	4.15	4.01	3.97
Research Skills	4.05	4.10	4.01	3.93	4.04	4.03	3.97
Critical Thinking Skills	4.05	4.11	4.06	4.02	4.28	4.10	3.91
Grammar Skills	3.56	3.76	3.64	3.79	3.91	3.73	3.77
Science Skills	3.98	3.83	3.74	3.82	3.82	3.84	3.76
Math Skills	3.96	3.86	3.93	3.87	3.86	3.90	3.71
Study Skills	3.87	4.01	3.87	3.83	4.05	3.93	3.69
Appreciation of the Arts	3.72	3.61	3.65	3.51	3.73	3.64	3.52
Technology Skills	3.65	3.42	3.38	3.48	3.29	3.44	3.52
Public Speaking Skills	3.45	3.57	3.50	3.61	3.59	3.54	3.50
Foreign Language Skills	3.61	3.38	3.19	3.09	3.26	3.31	3.01

The Class of '04 rated 4 of the 15 skill areas as Exceptionally Strong; another 7 skill areas fell into the Strong or Very Strong range. Three scores were Neutral, and only one was rated as Weak. Two scores varied significantly from the 5-year averages. In both instances, the scores decreased. Study Skills fell from an average of 3.93 to 3.69, and Foreign Language dropped from an average of 3.31 to 3.10.

Average Rating for Subject Areas

Next students were asked to rate the eleven primary subject areas at Needham High School.

Subject	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Resource Room/PLC	4.00	4.44	4.28	4.10	4.23	4.21	4.32
English	4.23	4.34	4.30	4.19	4.39	4.29	4.20
Social Studies	3.84	4.05	4.05	4.04	4.30	4.06	3.98
Mathematics	3.82	3.82	3.91	3.93	3.99	3.87	3.90
Art	3.98	3.81	3.64	3.75	3.87	3.81	3.81
Science	4.00	4.03	3.86	3.87	3.88	3.93	3.79
Media/Technology	3.52	3.28	3.64	3.86	3.43	3.54	3.71
Physical Education	3.83	3.72	3.62	3.68	3.45	3.66	3.70
Music	3.47	3.88	3.96	3.72	3.85	3.78	3.66
Health Education	3.80	3.62	3.54	3.55	3.45	3.59	3.41
Foreign Languages	3.43	3.28	3.05	3.02	3.11	3.18	3.21
Average	3.87	3.89	3.80	3.79	3.88	3.81	3.79

These ratings tend to confirm the skill areas scores discussed above. English continues to be the highest rated academic subject; however, Resource Room/PLC, which are extra supports for students, received the highest rating among all the areas surveyed. Social studies, mathematics, science, and art were rated Very Strong. All other subjects, except Health Education and Foreign Languages fell into the Strong range. No subject varied significantly from the five-year averages.

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.

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Career Exploration	50.4	55.6	52.3	52.8	58.4	53.9	47.6
Leadership Development	36.3	26.6	27.0	35.0	27.4	30.5	32.4
Study Skills	31.0	25.8	24.3	29.3	27.4	27.6	29.5
Independent Projects	30.1	20.2	26.1	33.3	22.1	26.4	25.7
Computer Skills	39.8	58.9	39.6	39.0	39.8	43.4	22.9
Creativity	21.2	13.7	22.5	27.6	19.5	20.9	22.9
Research Skills	27.4	21.8	18.0	26.8	24.8	23.8	21.0
Self Discipline	23.9	22.6	18.9	24.4	18.6	21.7	19.0
Consumer Education	19.5	16.1	15.3	24.4	19.5	19.0	18.1
Lifelong Learning	20.4	19.4	10.8	15.4	15.0	16.2	18.1
Environmental Education	11.5	19.4	10.8	21.1	11.5	14.9	15.2
Understanding Others	15.0	24.2	11.7	15.4	8.8	15.0	11.4
Class Participation	15.0	8.9	12.6	16.3	17.4	14.0	10.5
Nutrition & Diet	8.8	11.3	13.5	13.8	9.7	11.4	10.5
Sex Education	4.1	9.7	8.1	13.0	8.8	8.7	8.6
Community Service	11.5	12.1	10.8	12.2	8.8	11.1	7.6
Citizenship	9.7	12.1	5.4	9.8	6.2	9.7	7.6
Family Living/Parenting	8.8	12.9	5.4	12.2	13.3	10.5	6.7
Physical Fitness	4.4	5.6	7.2	11.4	3.5	6.4	6.7
Homework	13.3	7.3	4.5	8.9	6.2	7.3	4.8
Drug & Alcohol Education	5.3	5.6	3.6	7.3	4.4	5.2	4.8

There is remarkable consistency to the responses of all six classes. The same five or six areas tend to top the list for each class. Career Education was identified again as the area most in need of expansion, with over 47% of the Class of '04 listing it. Although Computer Education still ranked near the top of the list (5th), the percentage of students indicating that it needed more emphasis declined significantly. It had averaged over 43% with the five previous classes, but only 22.9% of the '04 graduates listed it as needing more emphasis.

Counseling

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

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Schedule Adjustment Services	3.80	4.01	4.05	3.83	3.90	3.92	4.10
Availability	3.70	3.61	3.81	3.89	3.69	3.74	4.08
Course Planning	3.68	3.74	3.70	4.05	3.97	3.83	3.97
College Planning	3.54	3.31	3.69	3.76	3.79	3.62	3.76
Academic Problems	3.24	3.85	3.92	3.68	3.73	3.68	3.64
Personal Problems	3.37	3.23	3.46	4.29	3.88	3.65	3.45
Career Planning	3.00	2.79	3.14	3.17	2.93	3.01	3.40
Career & Job Resources	2.80	2.82	3.15	3.27	3.60	3.13	3.25
Average	3.47	3.42	3.62	3.79	3.77	3.61	3.91

The average rating for guidance among the 2004 graduates (3.91) was significantly higher than the 5-year average, and the scores have been on a general upward trend. The average score now falls in the Very Strong range. Among the various guidance functions, Availability and Career Planning had the largest increases and were largely responsible for the overall increase. The Availability increase may be correlated to the addition of a guidance counselor in 2003-04. There was a significant decline in counseling around Personal Problems and Career and Job Resources when compared to the last group of surveyed graduates. In 2004-05 a career specialist was added to the Guidance Department at the High School, it will be interesting to see what effect this additional resource has on these scores relating to career planning and resources for future graduating classes.

Media Center

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

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Print Resources	3.85	3.97	3.74	3.65	3.96	3.83	3.85
Technology Resources	3.99	3.93	3.68	3.65	3.94	3.84	3.82
Study Climate	3.25	3.30	3.18	3.23	3.57	3.31	3.52
Average	3.70	3.78	3.51	3.53	3.88	3.66	3.77

The overall rating for the Media Center was in the Strong range and was similar to the five-year average. Although there was a decrease in all scores from last year, the difference is not considered significant. As in previous surveys, Study Climate received the lowest score.

Co-Curricular Activities

The graduates rated their co-curricular activities.

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Athletics	4.24	4.39	4.24	4.41	4.37	4.33	4.26
Drama	3.68	4.48	4.50	3.90	4.04	4.12	4.17
Music	3.76	4.13	4.34	4.29	4.27	4.16	4.04
Clubs	3.96	3.99	3.94	3.90	3.86	3.93	3.92
Publications	3.78	4.08	3.53	3.11	3.53	3.61	3.60
Student Government	4.14	4.10	4.43	3.94	3.64	4.05	3.22

As in previous years, most of the co-curricular activities received very high ratings. Athletics, Music, and Drama all were rated as Exceptionally Strong; and Clubs were Very Strong. Each of these areas also received ratings from the Class of '04 that were very similar to the five-year averages. The rating for Publications was in the Strong range and was within .01 point of the five-year average. Student Government declined significantly and is much lower than the five-year average. It is important to point out that only nine alumni answered this question, so the rating can be skewed up or down by the responses of only a few students.

Of the students who participated in a co-curricular activity, 62.0% said that it had a positive effect on their academic performance. A surprising 14.0% said that co-curricular activities had a negative impact on their academic performance. The highest percentage of students who had indicated that co-curricular activities had a negative impact in the five previous surveys was 3.4%, and the average for all five surveys was 1.9%. It will be important to monitor this number to see if it is a trend or an anomaly.

In this section, students were also asked about working during their years at the High School; 61.9% said that they had worked a part-time job during their senior year at Needham High School. Of this group, 40.6% said that they worked over 10 hours per week. Almost one in ten (9.5%) students said that they would have done better academically if they had not worked. One in five, or 20.3%, 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 issue had been a problem while they were in high school.

Area	Class of:					5-year Average	'04
	'99	'00	'01	'02	'03		
Condition of Building	31.0	33.9	45.0	36.6	47.8	38.9	49.5
Academic Pressure	38.1	38.7	43.2	44.7	46.7	42.3	49.5
Cheating	1.5	23.9	17.1	30.1	36.3	21.8	45.7
Lack of Student Morale	31.0	31.5	23.4	28.5	19.5	26.8	39.0
Alcohol Use	36.3	29.0	32.4	20.3	23.9	28.4	34.3
Social Acceptance	38.9	26.6	34.2	25.2	24.8	29.9	33.3
Drug Use	23.9	23.4	27.9	24.4	19.5	23.8	30.5
Smoking	31.0	21.0	27.9	28.5	23.0	26.3	26.7
Class Size	25.7	26.6	25.2	10.6	18.6	21.3	14.3
Respect by Administration	16.7	12.4	7.5	14.3	10.1	12.2	14.3
Harassment	22.1	10.5	11.7	10.6	8.8	12.7	10.5
Respect by Students	10.4	9.7	11.2	13.8	10.0	11.0	5.9
Respect by Teachers	6.3	5.0	6.6	9.5	5.5	6.6	2.9
Respect by Support Staff	6.5	5.6	5.6	3.6	3.7	5.0	1.0
School Safety	3.5	2.4	3.6	0.8	0.9	2.2	1.0

The top three concerns (Condition of the Building, Academic Pressure, and Cheating) have remained the same for the past three years. About half of the students indicated that the building condition and pressure were a problem for them while they were at Needham High School. Cheating was close behind with 45.7%. The concern around cheating more than doubled the five-year average and continued a general upward trend. Larger percentages of the Class of '04 indicated concerns about a number of other areas including Social Acceptance, Alcohol Use, Lack of Student Morale, and Drug Use. There was some improvement around issues of Class Size, Respect by Students, Respect by Teachers, and Respect by Support Staff. A concern about School Safety continued to be very small.

Summary and Conclusion

The overall rating for Needham High School falls in the Very Strong range; consequently, we can feel very confident in stating that 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 for the past five years:

Class of 1999	3.99
Class of 2000	4.02
Class of 2001	3.91
Class of 2002	4.05
Class of 2003	4.20
Five-year Average	4.03
Class of 2004	3.97

Despite the decline from the previous year, the 3.97 overall rating from the Class of '04 is very much in line with the previous five-year average. 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:

26.9%	Very Favorable
54.8%	Generally Positive
9.6%	Neutral
5.8%	Generally Negative
2.9%	Strongly Negative

There was a greater percentage (8.7%) of Generally Negative or Strongly Negative responses than in previous years. The largest combined negative percentage prior to this class was 5.4% from the Class of '03. The High School administration should monitor this number to see if it continues and attempt to determine the reasons why about one in twelve of the respondents reported a negative high school experience.

The questionnaire responses advise us of 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, the greatest concern from the Class of '04, Condition of the Building, is being addressed by the building of a new and renovated High School which is in progress. However, there are other areas which require further study and reaction:

- 1) Academic pressure is a rising concern among our graduates. A Task Force has been created at the High School to study this problem and to develop recommendations for addressing the issue. For the first time, many more students indicate that work and extracurricular activities are impacting on their academic performance, which may also relate to issues of being over-extended and stress. It is important that we take a comprehensive look at the life of the High School student and to determine ways to help minimize issues of stress.

- 2) The percentage of students identifying cheating as a concern has risen dramatically over the years that this questionnaire has been given – from 1.5% in 1999 to 45.7% in 2004. Many theories exist to explain this rise - from increased academic pressure to the internet. The High School has already taken a number of steps to address the problem including the use of software to identify plagiarism and student education around source documentation. This is a problem that will continue to warrant focus and may lend itself to a student-initiated response.
- 3) Foreign language continues to be an area of dissatisfaction for our graduates. Some changes have already taken place in the department including an administrative reorganization, staff turnover, and a focus on standards-based instruction. However, there continues to be a downward trend.
- 4) 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. The results from future alumni surveys should be used to help monitor the success of these efforts.
- 5) Job knowledge, career exploration, and vocational planning continue as areas of need for our students. A new position was added to the High School staff for the Class of '05 to help address these issues. It will be interesting to see if this area becomes less of a problem for students.