To: Traditional Learner Subcommittee of Strategic Self Study  
From: Anne McNabb  
Subject: Analysis of survey data from a variety of sources in relation to Educational Goals  
1/12/97

This report compiles some of the Outcomes Assessment information collected by John Muffo’s office. One of our key interests in this data was to determine whether our lists of presumed “Needs” for education (as phrased by the University, employers, students and parents) were congruent with other sources of information. The data are given within the context of the lists of needs we phrased. I’ve already sent you a separate report on the computer relevant information from surveys and Barbara Pendergrass and I are asking John M for additional cross referencing of that information against gender, race, and QCA (to the extent this information is available).

In Section 1 below (Needs defined by the University), the survey data are only useful for determining the extent to which a need is accomplished (e.g. graduation within a certain time, retention of students, etc) or the extent to which students perceive they have developed regarding an educational goal of the University (e.g. critical thinking, problem solving).

Section 3 (Needs defined by students) contains the most useful information. We wanted to know if our list of presumed student needs fitted with what the students were saying. Here are the ones we listed, rank ordered on that basis (most important first). Note that there isn’t any information about some of the needs we listed (e.g. safety on campus, communication with parents).

1. Vocational needs:
   a. develop skills and knowledge for profession  
      Ext/very important  81.6%, Imp. 14.7%
   b. explore career options and establish goals
      “ “ “ 84.4%, “ 12.2%

2. Improve intellectual skills (critical thinking, problem solving):
   writing skills
   “ “ “ 75.5%, “ 17.8%
   speaking and presentation skills
   “ “ “ 76.9%, “ 17.5%

3. Personal development:
   a. knowledge for con’t growth and self development
      “ “ “ 80.4%, “ 13.8%
   b. personal/social maturation
      “ “ “ 79.1%, “ 15.7%

4. To become a good citizen:
   self understanding and service to society
   “ “ “ 76.8%, “ 16.2%

5. The Collegiate experience (extracurricular):
   “ “ “ 44.7%, “ 32.7%

6. Preparation for graduate or professional school
   Ext/very important  39.3%, imp. 23.3%

7. Development of leadership skills
   Need lot/moderate help 33.9%, little 38.2%

Survey name abbreviations:
ES = entering students that attend orientation (almost exclusively 1st yr, few transfers)
GS = graduating seniors (importance of goals and how well those goals were achieved)
A = alumni
T = college activities survey (includes time expenditure) 3 yr cycle of 450-600 students
S = student opinion survey’ (college environment) 
N = needs assessment survey
EDUCATIONAL GOALS OF/FOR TRADITIONAL LEARNERS:

1. As defined by the University. (list generated by committee but not ranked in order of importance).

(a) to graduate in 4-6 years.
- overall 6 yr graduation rate for the U: students entering 1989, graduation by 1995 was 73% (4285 students). The rate for different colleges at Tech ranged from 67-77%. (IRPA 95-96 #19)
- John Muffo can supply long range data showing that this graduation rate at Tech has been very stable and that it is higher than national averages (figures in 60-65% range). As a land grant U, Tech is somewhat unusual in having selective entrance standards rather than open admissions. This is a big factor in the graduation rates.

(b) to continue to enroll and make progress toward degree.
- year to year return rates are about 85% (IRPA data)
- detailed analysis of reasons why students don’t return to Tech was prepared for the Provost by the Center for Survey Research (undergrads enrolled in fall 94 who did not return in fall 95; survey of 592 students at a variety of class levels). - I haven’t tabulated this one yet.

- student opinion information: (GS #47)
  The grade requirements for remaining in school after the freshman and sophomore years are appropriate.
  
<table>
<thead>
<tr>
<th></th>
<th>strongly agree/agree</th>
<th>tend to agree</th>
<th>no opinion</th>
<th>tend to disagree</th>
<th>disagree/strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>all agree categories</td>
<td>58.6%</td>
<td>21.5%</td>
<td>11.5%</td>
<td>3.7%</td>
<td>3.0%</td>
</tr>
<tr>
<td>all disagree categ.</td>
<td>80.1%</td>
<td></td>
<td></td>
<td></td>
<td>6.7%</td>
</tr>
</tbody>
</table>

(c) to prepare for a career.

T - section on the College Environment
Fifth question - Emphasis on the personal relevance and practical values of courses.
<table>
<thead>
<tr>
<th>Strong emphasis (5-7)</th>
<th>Weak emphasis (1-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>84.2%</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

T - Estimate of gains section (estimate of the extent to which you have gained or made progress)
First q on left- Gain in vocational training (knowledge and skill applicable to a specific job).
  |                |                |
  | Very much     | 17.4%          |
  | Quite a bit   | 32.1%          |
  | Some          | 33.4%          |
  | Very little   | 15.8%          |

Third q on left -Gain in information relevant to a career.
  |                |
  | Very much     | 21.3%          |
  | Quite a bit   | 46.4%          |
  | Some          | 26.8%          |
  | Very little   | 4.2%           |
(d) to prepare for life-long learning (I’ve included critical thinking and problem solving in this one).

T - Section on the College Environment (emphasis the University puts on each; scale with 7 being the strongest emphasis)

First question - Development of academic, scholarly and intellectual qualities.
- Strong emphasis (5-7) 84.2%
- Weak emphasis (1-3) 4.6%

Third question - Emphasis on being critical, evaluative and analytical.
- Strong emphasis (5-7) 79.6%
- Weak emphasis (1-3) 6.1%

T - Section on Estimate of Gains

Seventh q on right - Gains in ability to think analytically and logically.
- Very much 24.6%
- Quite a bit 39.3%
- Some 28.8%
- Very little 6.2%

Ninth q on right - Gain in ability to put ideas together, to see relationships, similarities and differences between ideas.
- Very much 19.1%
- Quite a bit 47.5%
- Some 28.1%
- Very little 4.0%

Tenth q - Gain in ability to learn on your own, pursue ideas, and find information you need.
- Very much 29.2%
- Quite a bit 43.5%
- Some 22.6%
- Very little 3.3%

(e) to prepare for graduate or professional study.

T - Estimate of gains section.

Second q on left - Gain in acquiring background and specialization for further education in some professional, scientific or scholarly field.
- Very much 19.8%
- Quite a bit 38.2%
- Some 33.8%
- Very little 6.8%

(f) to fulfill goals in general education.

GS #51 The U-wide Core Curriculum should continue to be required for all undergraduate students.
- Strongly agree/agree 40.0%
- Tend to agree 24.4%
- No opinion 10.9%
- Tend to disagree 12.6%
- Disagree/strongly disagree 10.8%
T Estimate of Gains section.
Third q on left - 
Gaining a broad general education about different fields of knowledge.

<table>
<thead>
<tr>
<th>Degree of Gain</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>13.8%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>43.1%</td>
</tr>
<tr>
<td>Some</td>
<td>36.7%</td>
</tr>
<tr>
<td>Very little</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

(g) to **prepare to contribute to society**

(h) to **understand global society** *(stated as a Core Value)*

T Estimate of Gains section.
Ninth q on left - 
Gains in becoming aware of different philosophies, cultures and ways of life.

<table>
<thead>
<tr>
<th>Degree of Gain</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>15.2%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>35.8%</td>
</tr>
<tr>
<td>Some</td>
<td>30.8%</td>
</tr>
<tr>
<td>Very little</td>
<td>16.3%</td>
</tr>
</tbody>
</table>

First q on right - 
Gains in understanding other people and the ability to get along with different kinds of people.

<table>
<thead>
<tr>
<th>Degree of Gain</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>28.6%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>45.7%</td>
</tr>
<tr>
<td>Some</td>
<td>21.8%</td>
</tr>
<tr>
<td>Very little</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

(i) to **have integrated knowledge across disciplines.**

(j) to **prepare for deep work in a specialty.**

(k) **personal growth and maturation,** *(part of the Core Value about educating the whole person?)*

T Estimates of Gain section.
10th q on left - “developing your own values and ethical standards” and
11th q on left - “understanding yourself - your abilities, interests and personality”.

(l) to **produce good alumni.**

*(m) **computer literacy** *(see separate report on computer related issues)*

T Estimate of gains section - 
8th on left - “acquiring familiarity with the use of computers.

2. **As defined by external constituencies (employers, business, industry, society)**

John Muffo has some general information in this area from the Outcomes Assessment info from depts.
Janice has surveys of employers from Placement.
3. As defined by students and parents.

**Students:**

**(a) vocational outcomes.**

ES #28 In deciding to go to college, how important was “to be able to get a better job”.

GS #7 Gain knowledge and develop skills that apply to a specific profession.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Extremely/very important</th>
<th>Important</th>
<th>Somewhat important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely/largely achieved</td>
<td>81.6%</td>
<td>14.7%</td>
<td>2.1%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Moderately achieved</td>
<td>66.1%</td>
<td>25.5%</td>
<td>6.0%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

GS # 17 Understanding of professional and ethical standards.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Extremely/very important</th>
<th>Important</th>
<th>Somewhat important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely/largely achieved</td>
<td>67.8%</td>
<td>22.0%</td>
<td>5.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Moderately achieved</td>
<td>57.4%</td>
<td>29.0%</td>
<td>9.3%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

**N section on career and life goals.** Importance of:

#1 - To have a steady job.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Very/moderately important</th>
<th>Somewhat important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>96.4%</td>
<td>2.7%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

#3 - To be recognized as an expert by colleagues in my field of study.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Very/moderately important</th>
<th>Somewhat important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>65.9%</td>
<td>24.3%</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

#6 - To own and operate my own business.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Very/moderately important</th>
<th>Somewhat important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37.6%</td>
<td>27.1%</td>
<td>34.8%</td>
</tr>
</tbody>
</table>

**N - section on educational and personal needs.**

Learning about job opportunities.

<table>
<thead>
<tr>
<th>Help amount</th>
<th>Need lot/medium amount of help</th>
<th>Need a little help</th>
<th>Need no help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69.7%</td>
<td>21.7%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

Learning more about educational requirements.

<table>
<thead>
<tr>
<th>Help amount</th>
<th>Need lot/medium amount of help</th>
<th>Need a little help</th>
<th>Need no help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48.9%</td>
<td>34.8%</td>
<td>14.4%</td>
</tr>
</tbody>
</table>

Arranging to discuss my career interests.

<table>
<thead>
<tr>
<th>Help amount</th>
<th>Need lot/medium amount of help</th>
<th>Need a little help</th>
<th>Need no help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>59.9%</td>
<td>27.2%</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

Obtaining job experience in my area.

<table>
<thead>
<tr>
<th>Help amount</th>
<th>Need lot/medium amount of help</th>
<th>Need a little help</th>
<th>Need no help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69.2%</td>
<td>19.9%</td>
<td>9.2%</td>
</tr>
</tbody>
</table>
Developing effective job seeking skills.

- Need lot/medium amount of help: 58.0%
- Need a little help: 31.0%
- Need no help: 9.2%

(b) safety and well-being.

c) maintaining contact between students and parents.

(d) personal and social maturation.

GS#4 Improve personal skills (self reliance and self confidence).

- Extremely/very important: 79.1%
- Important: 15.7%
- Somewhat important: 3.0%
- Not important: 1.0%

- Definitely/largely achieved: 70.3%
- Moderately achieved: 22.0%
- Small achievement: 5.1%
- Did not achieve: 0.8%

GS # 14  Development of personal values and a code of ethics.

- Extremely/very important: 75.4%
- Important: 16.7%
- Somewhat important: 4.2%
- Not important: 3.2%

- Definitely/largely achieved: 71.8%
- Moderately achieved: 20.1%
- Small achievement: 4.8%
- Did not achieve: 2.9%

N -Educ and personal needs section

- #34 - identifying strengths and weaknesses.
- #35 developing personal values.
- #36 learning how to handle stress.
- #37-46 - all self development related.

T - Estimate of Gains section

Gain in understanding yourself.

- Very much: 32.5%
- Quite a bit: 40.7%
- Some: 18.7%
- Very little: 7.0%

Gain in developing own values and ethics.

- Very much: 25.5%
- Quite a bit: 36.5%
- Some: 27.9%
- Very little: 8.6%

Needs Assessment Survey.

Identifying my strengths and weaknesses.

- Need lot/medium amount of help: 26.1%
- Need a little help: 39.6%
- Need no help: 33.0%

Developing personal values.

- Need lot/medium amount of help: 10.1%
- Need a little help: 31.7%
- Need no help: 56.7%
Learning how to handle stress and anxiety.
   Need lot/medium amount of help  32.0%
   Need a little help  37.5%
   Need no help  29.5%

Expressing my own views and opinions.
   Need lot/medium amount of help  17.3%
   Need a little help  30.7%
   Need no help  51.0%

Developing confidence in myself.
   Need lot/medium amount of help  24.2%
   Need a little help  35.6%
   Need no help  39.0%

Learning how to make decisions effectively.
   Need lot/medium amount of help  26.5%
   Need a little help  38.2%
   Need no help  34.1%

Learning how to solve personal problems.
   Need lot/medium amount of help  20.2%
   Need a little help  37.5%
   Need no help  40.8%

Becoming more self reliant.
   Need lot/medium amount of help  16.2%
   Need a little help  34.8%
   Need no help  47.6%

Learning how to work effectively on my own.
   Need lot/medium amount of help  15.8%
   Need a little help  31.0%
   Need no help  51.9%

Managing my time more effectively.
   Need lot/medium amount of help  38.2%
   Need a little help  35.3%
   Need no help  25.7%

(e) the “collegiate experience”.
GS #6 Participate in extracurricular activities.
   Extremely/very important 44.7%  definitely/largely achieved 45.8%
   Important 32.7%  moderately achieved 28.2%
   Somewhat important 16.2%  small achievement 19.2%
   Not important 6.1%  did not achieve 6.4%

(f) leadership opportunities.
Needs Assessment Survey.
Developing my leadership skills.
   Need lot/medium amount of help  33.9%
   Need a little help  38.2%
   Need no help  26.4%
Items from “Clubs and Organizations section of T."

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very Often</th>
<th>Often</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looked in the student newspaper for notices about campus events and student organizations.</td>
<td>15.6%</td>
<td>27.5%</td>
<td>41.5%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Attended program put on by student group.</td>
<td>12.3%</td>
<td>19.1%</td>
<td>49.5%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Read or asked about club or organization.</td>
<td>7.9%</td>
<td>20.2%</td>
<td>54.3%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Attended meeting of club or organization.</td>
<td>23.1%</td>
<td>16.7%</td>
<td>32.5%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Voted in student election.</td>
<td>8.1%</td>
<td>9.2%</td>
<td>22.4%</td>
<td>59.3%</td>
</tr>
<tr>
<td>Discussed politics and issues.</td>
<td>5.9%</td>
<td>10.5%</td>
<td>37.1%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Worked in some student organization.</td>
<td>15.4%</td>
<td>8.4%</td>
<td>14.7%</td>
<td>60.7%</td>
</tr>
<tr>
<td>Discussed success or failures of meetings.</td>
<td>10.3%</td>
<td>11.0%</td>
<td>24.6%</td>
<td>53.2%</td>
</tr>
<tr>
<td>Worked on a committee.</td>
<td>13.8%</td>
<td>9.0%</td>
<td>13.8%</td>
<td>62.0%</td>
</tr>
</tbody>
</table>
Met with faculty advisor of club.

- Very often: 6.6%
- Often: 5.7%
- Occasionally: 13.4%
- Never: 73.2%

**(g) become good citizens.**

ES#36 Question about attitude: Importance of influencing the political structure; influencing social values; helping others who are in difficulty; involvement in programs cleaning up the environment; participating in a community action program; helping to promote racial understanding; keeping up to date with political affairs; becoming a community leader.

GS#1 self understanding and service to society.

- Extremely/very important: 76.8% definitely/largely achieved: 67.9%
- Important: 16.2% moderately achieved: 26.6%
- Somewhat important: 5.2% small achievement: 4.1%
- Not important: 1.4% did not achieve: 0.7%

GS #5 Increase my knowledge of different philosophies, cultures, lifestyles.

- Extremely/very important: 46.2% definitely/largely achieved: 40.2%
- Important: 30.1% moderately achieved: 38.4%
- Somewhat important: 16.7% small achievement: 17.5%
- Not important: 6.5% did not achieve: 3.5%

T - Estimate of gains section.

Gain in knowledge about the world.

- Very much: 8.4%
- Quite a bit: 16.9%
- Some: 40.0%
- Very little: 33.6%

N- career and life goals section. Importance of:

#7 - To be active in politics.

- Very/moderately important: 19.9%
- Somewhat important: 29.3%
- Not important: 50.5%

**(h) decision making about life.**

GS #3 Explore career options and establish career goals.

- Extremely/very important: 84.4% definitely/largely achieved: 52.6%
- Important: 12.2% moderately achieved: 33.0%
- Somewhat important: 2.6% small achievement: 12.5%
- Not important: 0.5% did not achieve: 1.6%

N- Educ and personal needs section. Importance of:

#1 Deciding what to do with my life.

- Need lot/medium amount of help: 32.7%
- Need a little help: 37.7%
- Need no help: 27.9%
#2 Identifying career areas.
Need lot/medium amount of help 38.6%
Need a little help 33.9%
Need no help 25.7%

(i) social connections and connectedness.
T - see section on personal experiences and on student acquaintances.

(j) variety of opportunities.

(k) good education (include good grades)
ES #28 In deciding to go to college, how important was “to learn about things that interest me”.

GS#48 Virginia Tech has an image as a strong academic institution.
Strongly agree/agree 64.6%
Tend to agree 25.4% all agreement 90.0%
No opinion 4.6%
Tend to disagree 3.5%
Disagree/strongly disagree 1.4%

GS #10 Importance of being able to write well.
Extremely/very important 75.5% definitely/largely achieved 56.3%
Important 17.8% moderately achieved 33.6%
Somewhat important 5.6% small achievement 7.9%
Not important 0.7% did not achieve 1.7%

GS #16 Importance of ability to speak well and give oral presentations.
Extremely/very important 76.9% definitely/largely achieved 52.4%
Important 17.5% moderately achieved 31.2%
Somewhat important 4.3% small achievement 13.5%
Not important 0.8% did not achieve 2.2%

N- Educ and personal needs section
#9-13 are about services needed to facilitate obtaining a good education.

Selecting courses necessary for my program.
Need lot/medium amount of help 18.7%
Need a little help 40.2%
Need no help 34.4%

Getting counseling about my educational plans.
Need lot/medium amount of help 27.5%
Need a little help 39.9%
Need no help 27.1%

Getting remedial/tutorial assistance.
Need lot/medium amount of help 12.7%
Need a little help 23.8%
Need no help 44.3%

Coping with academic difficulties.
Need lot/medium amount of help 17.5%
Need a little help 22.3%
Need no help 38.7%
Learning about educational opportunities.
  Need lot/medium amount of help  48.6%
  Need a little help  29.3%
  Need no help  15.1%

(l) freedom.
ES #28 In deciding to go to college, how important was “wanted to get away from home”.

(m) expect to be treated as a consumer.

(n) skills for lifelong learning.
GS #20 Gain knowledge for continued growth and self-development.
  Extremely/very important  80.4%  definitely/largely achieved  71.0%
  Important  13.8%  moderately achieved  21.5%
  Somewhat important  4.1%  small achievement  5.4%
  Not important  0.9%  did not achieve  1.3%

T- Estimate of gains section.
Gain in ability to learn on own.
  Very much  29.2%
  Quite a bit  43.5%
  Some  22.6%
  Very little  3.3%

*(o) preparation for graduate or professional school.
ES #16 What is the highest academic degree that you intend to obtain?
GS #8 Prepare for graduate or professional school.
  Extremely/very important  39.3%  definitely/largely achieved  33.0%
  Important  23.3%  moderately achieved  31.4%
  Somewhat important  18.4%  small achievement  16.3%
  Not important  18.4%  did not achieve  17.6%

S- #E question
N - #18 learning about opportunities after graduation (e.g. grad or professional school)
  #23-30 - skills related development.

*(p) general education.
ES #28 In deciding to go to college, how important was “to gain a general education and appreciation of ideas” and “to make me a more cultured person”.

GS#9 Understanding and appreciation of the liberal arts and humanities.
  Extremely/very important  25.9%  definitely/largely achieved  28.9%
  Important  35.0%  moderately achieved  40.7%
  Somewhat important  26.8%  small achievement  23.4%
  Not important  11.8%  did not achieve  6.5%

GS#11 Understanding and appreciation of mathematical disciplines.
  Extremely/very important  53.9%  definitely/largely achieved  50.5%
  Important  30.0%  moderately achieved  32.5%
  Somewhat important  11.9%  small achievement  13.2%
  Not important  3.7%  did not achieve  3.4%
### GS#13 Understanding and appreciation of the physical and life sciences.

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Extremely/Very Important</th>
<th>Definitely/Largely Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely/Very Important</td>
<td>47.6%</td>
<td>41.9%</td>
</tr>
<tr>
<td>Important</td>
<td>31.1%</td>
<td>34.9%</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>15.7%</td>
<td>19.2%</td>
</tr>
<tr>
<td>Not Important</td>
<td>5.2%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

### GS#15 Understanding of the social and behavioral sciences.

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Extremely/Very Important</th>
<th>Definitely/Largely Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely/Very Important</td>
<td>33.4%</td>
<td>31.7%</td>
</tr>
<tr>
<td>Important</td>
<td>37.6%</td>
<td>42.3%</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>22.2%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Not Important</td>
<td>6.0%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

### GS#18 Awareness of the consequences (good and bad) of new applications of science and technology and their impacts on people and the environment.

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Extremely/Very Important</th>
<th>Definitely/Largely Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely/Very Important</td>
<td>63.6%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Important</td>
<td>24.4%</td>
<td>31.2%</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>8.7%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Not Important</td>
<td>2.0%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

### GS#19 Appreciation of art, music, drama and other cultural activities.

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Extremely/Very Important</th>
<th>Definitely/Largely Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely/Very Important</td>
<td>48.8%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Important</td>
<td>27.9%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>21.1%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Not Important</td>
<td>13.2%</td>
<td>12.4%</td>
</tr>
</tbody>
</table>

### *(q) develop intellectual skills (critical thinking, problem solving etc).* GS #2 Improve intellectual skills (critical thinking, logical reasoning, problem-solving).

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Extremely/Very Important</th>
<th>Definitely/Largely Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely/Very Important</td>
<td>88.9%</td>
<td>77.8%</td>
</tr>
<tr>
<td>Important</td>
<td>9.7%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>0.9%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Not Important</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

### T - Estimate of Gains section.

#### Gain in writing clearly and effectively.

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>9.5%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>38.5%</td>
</tr>
<tr>
<td>Some</td>
<td>40.7%</td>
</tr>
<tr>
<td>Very little</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

#### Gain in quantitative thinking.

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>15.8%</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>31.0%</td>
</tr>
<tr>
<td>Some</td>
<td>38.7%</td>
</tr>
<tr>
<td>Very little</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

### N- Student Needs Assessment.

#### Expressing my ideas in writing.

<table>
<thead>
<tr>
<th>Need Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need lot/medium amount of help</td>
<td>28.9%</td>
</tr>
<tr>
<td>Need a little help</td>
<td>41.6%</td>
</tr>
<tr>
<td>Need no help</td>
<td>27.9%</td>
</tr>
</tbody>
</table>
Developing my public speaking ability.
  Need lot/medium amount of help  51.6%
  Need a little help  32.5%
  Need no help  14.6%

Improving my understanding of what I read.
  Need lot/medium amount of help  29.0%
  Need a little help  38.0%
  Need no help  31.8%

Increasing my reading speed.
  Need lot/medium amount of help  39.4%
  Need a little help  26.4%
  Need no help  32.9%

Improving my study skills and habits.
  Need lot/medium amount of help  46.2%
  Need a little help  29.5%
  Need no help  23.1%

Improving my test-taking skills.
  Need lot/medium amount of help  45.4%
  Need a little help  31.3%
  Need no help  22.1%

Improving my problem solving abilities.
  Need lot/medium amount of help  29.6%
  Need a little help  40.8%
  Need no help  28.1%

*(r) computers (see summary of computer related info)
GS #12 Importance of skills in using computers.

Parents:
(a) vocational outcomes.
(b) safety and well-being.
(c) maintaining contact between students and parents.
(d) personal and social maturation.
(e) the “collegiate experience”.
(f) leadership opportunities.
(g) become good citizens.
(h) decision making about life.
(i) social connections and connectedness.
(j) variety of opportunities.
(k) good education (include good grades)
(l) freedom.
(m) expect to be treated as a consumer.
(n) skills for lifelong learning.

Alumni
We have the most recent alumni report (based on 1992 graduates).