Results from the 2014 Survey of Incoming Freshmen

**Office of Assessment
and Evaluation**
at Virginia Tech

Summary Report

Survey Background

A web-based survey was administered in summer 2014 to all incoming first-time, first-year students at Virginia Tech. This survey was designed and administered by the university's Office of Assessment & Evaluation in consultation with a group of faculty members experienced in working with undergraduate students. The purpose of the survey was to provide information regarding incoming students' previous learning experiences and perceptions of their future collegiate learning and engagement. The survey was designed to (1) incorporate what faculty and staff need to know about incoming students in order to facilitate their learning, and (2) provide an institutionally-focused set of questions rather than the more generic questions that appear on national instruments such as the CIRP and the NSSE. Student participation in the survey was voluntary and approval was obtained from Virginia Tech's Institutional Review Board prior to administering the survey.

Participants

Of the 5,625 incoming students invited to participate in the survey, 1,669 responded, resulting in a response rate of 29.7%. Of those students who completed the survey's demographic questions, 50.7% were female; 73.1% identified as White (non-Hispanic) and 12.8% as Asian/Pacific Islander.

- When asked "What do you think your primary major will be <u>when you graduate</u>?" 44.1% indicated that they intend to pursue a major in the College of Engineering; 17.4% in the College of Science; 12.3% in the Pamplin College of Business; 10.2% in the College of Agriculture & Life Sciences; 8.2% in the College of Liberal Arts & Human Sciences; 6.2% in the College of Architecture & Urban Studies; and 1.5% in the College of Natural Resources & Environment.
    - In comparison, of the students who graduated from Virginia Tech during the 2012-2013 academic year, 23.0% were from the College of Engineering; 22.8%, the College of Liberal Arts & Human Sciences; 18.0%, the College of Science; 17.7%, the Pamplin College of Business; 9.0%, the College of Agriculture & Life Sciences; 6.5%, the College of Architecture and Urban Studies; and 3.0%, the College of Natural Resources & Environment.
- The top five intended majors for first-time freshmen entering Virginia Tech in fall 2014 are (1) Mechanical Engineering with 11.9% of respondents; (2) Biological Sciences with 6.7% of respondents; (3) Computer Science with 5.5% respondents; (4) Aerospace Engineering with 4.7% of respondents; and (5) Human Nutrition, Foods, and Exercise with 4.2% of respondents.

Limitations

Since student participation in the survey was voluntary, the results may not be generalizable to the population of incoming freshmen who did not choose to participate. Many responses indicate what incoming students *intend to do* while they are at Virginia Tech rather than what students may *actually do* while on campus.

Results: What Students Hope to Gain by Coming to Virginia Tech

- 43.9% of students reported that their **primary reason for pursuing an undergraduate degree** at Virginia Tech was to help them get a job. However, almost the same percentage of students, 42.4%, indicated their primary motivation was to develop a strong foundation for success in graduate or professional school.
- Along similar lines, 51.6% of students reported that they anticipated their **principal activity upon graduation** to be employment, while 40.7% planned to attend graduate or professional school. The next most frequent response was military service with 5.3% of student responses.
- 93.5% of students indicated that they expect their **college learning experiences to prepare them** for a multicultural and global work environment (56.7% strongly agreed and 36.8% agreed with this statement).
- When students were asked **which *one* skill or ability they need to improve upon** the most to be successful, the five most frequent responses were as follows: oral communication skills (18.1%); critical thinking/analysis skills (13.0%); computer/ technology skills (11.7%); organizational ability (9.2%); and written communication skills (9.2%).
  - The five least frequent responses were ethical reasoning (0.8%); information literacy/library skills (2.3%); quantitative reasoning (3.4%); the ability to communicate with people different from myself (5.5%); and scientific reasoning (5.7%).
    - Some skills and abilities were selected more frequently by male students than by female students, and vice versa. Details are provided in Table 3 on page 7.
- When incoming freshmen were asked **what excited them the most about coming to Virginia Tech**, many were extremely enthusiastic, indicating that they were excited about both the academic and the social opportunities available at the university. Frequent responses included the following:
  - Learning new things/academic opportunities
  - Meeting new people/social opportunities
  - Strong sense of community/school spirit/becoming a Hokie
  - Being challenged/opportunities to grow and change
  - The campus
  - Football/athletics
  - Everything
  - Having more independence/freedom
  - The food
- These responses mirror Virginia Tech's recent 2014-2015 Princeton Review rankings in which Virginia Tech was ranked #1 for "Best Campus Food"; #3 for "Their Students Love These Colleges"; #5 for "Happiest Students"; and #5 for "Best Quality of Life."

Results: Openness to Challenge and Change

- As a group, the students who participated in the survey believe they will be challenged more intellectually than socially at Virginia Tech.
  - Most respondents, 93.8%, indicated that they **expect to be challenged intellectually** "often" or "all of the time" while at Virginia Tech.
    - On average, female students reported that they expect to be challenged more frequently intellectually than their male classmates ($p < .01$).
  - In contrast, 48.3% of students indicated that they **expect to be challenged socially** "often" or "all of the time."
    - On average, female students reported that they expect to be challenged more frequently socially than their male classmates ($p < .01$).
- When asked "**Do you think you will be the same person or a different person by the time you complete your degree?**" 61.9% of students reported that they expect to change significantly while at Virginia Tech.
  - More specifically, 10.5% reported that they expect to be a "different" person by the time they complete their undergraduate degree; 12.2% anticipated they would be a "mostly different" person; 39.2% selected "more different than the same"; 30.1% selected "more the same than different"; 7.1% selected "mostly the same"; and 0.8% selected "the same."
    - On average, female students were more likely to report that they would be a different person than their male classmates ($p < .01$).
- When students were asked to report their **level of confidence to successfully complete a challenging task in a high school class**, a substantial majority, 78.5%, reported that they felt "confident" or "extremely confident."
  - An additional 19.8% reported that they felt "somewhat confident." Only 0.7% of students reported that they were "not at all confident," while another 1.1% of students reported that they never had a challenging task in high school.
    - As a group, male students reported higher levels of confidence than female students ($p < .01$).

Results: Expectations Regarding Technology

- 91.1% of respondents indicated that they are **comfortable using computer technology for learning purposes** (47.3% strongly agreed and 43.8% agreed with this statement).
  - Only 2.3% of students disagreed or strongly disagreed with this statement. 6.6% of responses were neutral.
    - On average, male students indicated a greater level of comfort using computer technology for learning purposes than their female classmates ($p < .01$).
- 74.9% of students indicated that they **expect their instructors to use the latest computer technology to enhance their learning** (31.8% strongly agreed and 43.1% agreed with this statement).
  - Only 3.3% of students disagreed or strongly disagreed with this statement. 21.8% of responses were neutral.
    - On average, male students had higher expectations for their instructors to use the latest technology to enhance their learning than their female classmates ($p < .01$).

<u>Results: Thoughts on Diversity</u>

- In response to the item "**I prefer the company of people who are very similar to me** in background and expressions," the most frequent response was "neither agree nor disagree" with a 44.8% response rate. 21.4% of students agreed or strongly agreed that they prefer the company of people very similar to themselves, while 33.8% disagreed or strongly disagreed.
- However, in response to the item "**I find it difficult to relate to people from a different race or culture**," 82.8% of students disagreed or strongly disagreed with this statement. Only 1.6% of students agreed or strongly agreed with this item. The remaining 15.5% of responses were neutral.
- The vast majority of students, 85.3%, reported that they **enjoy meeting people who come from very different backgrounds** than their own. Only 0.2% of students disagreed with this statement. The remaining 14.5% of responses were neutral.
  - On average, male students were less likely to indicate that they enjoy meeting people from very different backgrounds than their female classmates ($p < .01$).
- 76.9% of students agreed or strongly agreed that **cultural diversity within a group makes the group more interesting and effective**. Only 2.6% of students disagreed or strongly disagreed with this statement. The remaining 20.5% of responses were neutral.
  - On average, male students were less likely to indicate that cultural diversity within a group makes the group more interesting and effective than their female classmates ($p < .01$).
- Similarly, 77.4% of students disagreed or strongly disagreed with the statement that "**It is hard for a group to function effectively when the people involved come from very diverse backgrounds.**" 5.0% agreed or strongly agreed with this statement, while 17.6% of responses were neutral.
- For two of the five diversity-related items described here, male students reported being less comfortable and less interested in interacting with people different from themselves than their female classmates.

<u>Results: High School Experiences and Anticipated University Involvement</u>

- When students were asked about instructional methods used in their high school classes, the most commonly reported method was teacher lecture. 83.3% indicated that teacher lecture was used more than 50% of the time in their high school classes, with 58.3% indicating that teacher lecture was used more than 75% of the time.
  - The second most commonly used instructional method was projects using technology. 52.2% of students reported that this instructional method was used in their high school classes more than 50% of the time, with 32.3% indicating that projects using technology were used more than 75% of the time.
  - All student responses to this question are provided in Table 1 on page 5.
- When students were asked to name one interesting book that they had read in the past year, the ten most frequent responses were as follows: (1) *1984*; (2) *The Kite Runner*; (3) *The Fault in Our Stars*; (4) *The Great Gatsby*; (5) *Brave New World*; (6) *Divergent*; (7) *A Game of Thrones*; (8) *Heart of Darkness*; (9) *The Things They Carried*; and (10) *The Catcher in the Rye*.

- 41.6% of survey respondents reported that they do not personally know any professionals working in their intended field of study. This suggests that many students may not have an accurate view of what a specific profession or major requires.
- When asked about expectations for their future participation at Virginia Tech, students were most likely to indicate (either during their first year or sometime while at the university) that they would participate in (1) an internship, field experience, co-op, or practicum; (2) organizations or clubs in their primary major; and (3) community service or volunteer work as part of a course.
  - Students indicated that they would be least likely to participate in (1) student government; (2) intercollegiate sports; and (3) a social fraternity or sorority.
  - Table 2 on page 6 shows student responses for each activity listed in the survey.

Table 1. Participant responses to "What percent of time were the following instructional methods used in your high school classes?"

Instructional Method Used in High School	Percent of Time Used						
	less than 10%	10-25%	26-50%	51-75%	76-90%	more than 90%	more than 50%*
discussion and debate	14.8%	28.8%	21.9%	18.2%	12.4%	3.9%	34.5%
student presentations	16.9%	31.4%	21.6%	16.1%	9.6%	4.3%	30.0%
teacher lecture	0.7%	3.9%	12.1%	25.0%	35.3%	23.0%	83.3%
role plays	69.0%	17.8%	7.1%	3.5%	1.4%	1.1%	6.0%
art and drama activities	59.5%	25.4%	7.5%	4.1%	1.8%	1.7%	7.6%
projects using technology	6.4%	20.4%	21.0%	19.9%	18.4%	13.9%	52.2%
group projects	5.3%	23.0%	26.7%	23.1%	15.9%	6.1%	45.1%
research projects	11.9%	26.3%	24.1%	19.6%	11.4%	6.8%	37.8%

*This column shows the total percentage of students reporting that a particular instructional method was used in their high school classes either 51-75%, 76-90%, or more than 90% of the time.

Table 2. Participant responses to "In which of the following do you think you will participate while at VT?"

Type of Activity	During my first year	Likely sometime while at VT	Probably not	Definitely not
Internship, field experience, co-op, or practicum	208 (13.0%)	1312 (81.9%)	72 (4.5%)	10 (0.6%)
Community service/volunteer work as part of a course	401 (25.1%)	983 (61.6%)	204 (12.8%)	7 (0.4%)
Community service/volunteer work outside of course requirements	571 (35.7%)	779 (48.7%)	236 (14.8%)	14 (0.9%)
University learning community (e.g., Galileo, Hypatia)	423 (26.5%)	316 (19.8%)	696 (43.6%)	162 (10.1%)
Research project with a faculty member	96 (6.0%)	1224 (76.6%)	274 (17.1%)	4 (0.3%)
Study abroad: break week or short-term	33 (2.1%)	938 (58.7%)	549 (34.4%)	78 (4.9%)
Study abroad: at least a semester	17 (1.1%)	765 (48.0%)	675 (42.3%)	137 (8.6%)
Attend a professional or scholarly meeting or conference	180 (11.3%)	1181 (73.9%)	228 (14.3%)	10 (0.6%)
Give a talk or exhibit work at a professional, scholarly, cultural, or artistic conference or meeting	45 (2.8%)	844 (53.3%)	638 (40.3%)	57 (3.6%)
Play intramural sports	561 (35.3%)	641 (40.3%)	291 (18.3%)	98 (6.2%)
Play intercollegiate sports	112 (7.1%)	296 (18.7%)	817 (51.6%)	357 (22.6%)
Organizations or clubs designed for people in my primary major	466 (29.5%)	1001 (63.3%)	109 (6.9%)	5 (0.3%)
Social fraternity or sorority	177 (11.2%)	406 (25.6%)	673 (42.5%)	328 (20.7%)
Student government	41 (2.6%)	301 (19.0%)	979 (61.8%)	263 (16.6%)
Attend one or more performing arts events	417 (26.3%)	849 (53.6%)	268 (16.9%)	50 (3.2%)

Table 3. Participant responses to "Which one of the following skills and abilities do you feel you need to improve upon the most to be successful?"

Skill or Ability	No. of Females and % of Total Responses	Ranking for Females	No. of Males and % of Total Responses	Ranking for Males	% Difference between Females and Males	No. of Total Responses and % of All Responses*	Overall Ranking
Oral communication skills	158 (56.2%)	1	123 (43.8%)	1	12.4%	298 (18.1%)	1
Critical thinking/analysis skills	119 (58.3%)	2	85 (41.7%)	5	16.6%	215 (13.0%)	2
Computer/technology skills	98 (52.4%)	3	88 (47.1%)	3 (tie)	5.3%	193 (11.7%)	3
Organizational ability	40 (27.6%)	9	104 (71.7%)	2	44.1%	152 (9.2%)	4
Written communication skills	55 (38.5%)	5 (tie)	88 (61.5%)	3 (tie)	23.0%	151 (9.2%)	5
Interpersonal (social) skills	52 (40.3%)	7	72 (55.8%)	6	15.5%	132 (8.0%)	6
Knowledge of global issues	86 (76.1%)	4	27 (23.9%)	10	52.2%	119 (7.2%)	7
Leadership skills	47 (50.5%)	8	46 (49.5%)	8	1.0%	96 (5.8%)	8
Scientific reasoning	55 (61.1%)	5 (tie)	35 (38.9%)	9	22.2%	94 (5.7%)	9
Ability to communicate with people different from myself	36 (41.4%)	10 (tie)	49 (56.3%)	7	14.9%	91 (5.5%)	10
Quantitative reasoning	36 (67.9%)	10 (tie)	17 (32.1%)	12	35.8%	56 (3.4%)	11
Information literacy/library skills	13 (34.2%)	12	25 (65.8%)	11	31.6%	39 (2.4%)	12
Ethical reasoning	5 (38.5%)	13	8 (61.5%)	13	23.0%	13 (0.8%)	13

*Some totals do not match the number of respondents in the females and males columns due to differences in response rates. There were 88 missing responses to the survey's gender question versus 20 missing responses to the "which one skill or ability do you most need to improve upon?" question. In addition, three respondents identified themselves as transgender and six respondents reported they were "not sure" of their gender identity.

Additional Information

For more information on the 2014 Survey of Incoming Freshmen, please contact Steve Culver, Assistant Provost for Assessment & Evaluation, Office of Assessment & Evaluation, at sculver@vt.edu or 540-231-4581.