



# BAYER FACTS OF SCIENCE EDUCATION VIII:

U.S. College Students Look Ahead Post  
September 11

## EXECUTIVE SUMMARY



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Prepared for:  
**Bayer Corporation**

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**The Gallup Organization**

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## Introduction and Methodology

The following report is based on the findings to a national survey of college students. The study examines college students' attitudes and opinions regarding the importance of science and technology, particularly as this relates to the post September 11, 2001 terrorist attacks.

The Bayer Facts of Science Education VIII was conducted by The Gallup Organization, Inc. and commissioned by Bayer.

The survey results are based on telephone interviews with a national sample of 1,000 full-time college students attending four-year colleges. All interviewing was conducted by the Gallup Organization's full-time interviewing staff during March and April of 2002. A three-call design was used, that is one initial call and up to two additional calls were made to reach an eligible respondent. Graduate students were not included in the study. The sample was randomly drawn from the American Student Listing (ASL) and statistically adjusted to represent all students from four-year colleges throughout the country. For results based on samples of this size, one can say with 95% confidence that the error attributable to sampling and other random effects could be plus or minus three percentage points. In addition to sampling error, question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

The results are based on college students who are permanent residents of the U.S. Students were not screened for U.S. citizenship but were asked citizen and residence questions at the end of the survey. If a student was not a citizen but was a permanent resident of the U.S., he/she was included in the sample. If, however, non-citizens were not permanent U.S. citizens, they were not included in the study. Among 1016 students surveyed, 16 students were identified as non-citizens and non-permanent residents.

## Key Survey Findings

### **Nearly One in Five College Students Rethinking Career Plans As a Result of Terrorist Attacks on America**

- In the current study of college students attending four-year colleges, a sizable number of students report they may be changing career plans as a result of the terror attacks on America. Seventeen percent of those surveyed say they have considered changing career plans, changed their major, or considered, for the first time, joining the military or intelligence fields. Male students were more likely than females to be rethinking career plans. Asked if any of their fellow students have seriously considered changing their career plans, students estimate that, on average, nearly one in every ten of their fellow students has seriously considered changing their career plans because of recent terrorist attacks.

### **Two-thirds of College Students See a Shift towards Careers That Benefit Society/Public Interest**

- One in five (20%) college students believe there will be a shift away from interest in careers that may offer greater financial rewards such as business and finance as a result of the terrorist attacks. While most don't necessarily see a shift away from financially rewarding careers, 67% do believe there will be an increase in interest toward careers that may benefit society or the public interest (72% among female students and 60% among male students).

### **Three-Quarters of College Students Expect U.S. Will Face Increasing Threats from Terrorists in the Coming Years and Virtually All Believe Science and Technology Will Be Important In Helping the U.S. Meet Future Terrorist Threats**

- Three in every four college students say they expect the U.S. will face increasing threats from terrorists in the years to come - 23% do not think this will happen. Two-thirds (66%) of the students surveyed believe science and technology and its sophisticated tools will be very important in helping the United States in meeting future terrorist threats. An additional 27% are of the opinion that science and technology is somewhat important in this regard.

### **Jobs and Technology: Seven in Ten College Students Believe America's New Emphasis on Homeland Security Will Create New Job Opportunities for College Students; Cite the Importance of Science and Technology**

- Seven in every ten (70%) college students believe that America's new emphasis on homeland security will create new job opportunities for college students. While a majority of students across all demographic groups hold this opinion, those attending colleges in the southern region of the country are more likely than those attending schools in the East to think there will be new job opportunities (76% vs. 64%).
- A large number (69%) of students say they are more aware today of the role of science and technology in the U.S. military, intelligence, and homeland security fields because of the new focus on terrorism at home and abroad (23% much more aware and 46% somewhat more aware).
- More than eight in ten (84%) students surveyed feel they are "science literate." Students majoring in science-related fields are the most likely to consider themselves science literate - 94%. However, even among those who are not majoring in a science-related field, 76% believe themselves to be science literate.
- A large majority (74%) of students feel that science literacy is important for them in their chosen career, though fewer than half (44%) say this is very important (30% report this is somewhat important in their career). Among students majoring in a science, engineering, math or engineering field, 81% believe this is very important. This contrasts sharply to those who are majoring in a non-science field where only 14% believe science literacy is very important in their

career. On the other hand, more than one in five do not believe they need to be scientifically literate to work in their chosen career

### **Most Students Believe The Next Most Important Scientific and Technological Innovations Will Come From The U.S.**

- Three-quarters (75%) of students believe that during the next 20 years, the most important scientific and technological innovations will come from the United States, while approximately one in five (22%) believe they will come from some other country. There was no variation in the responses to this question among the various student groups.

### **A Large Majority Feel Their Generation Can Work In Industries Involving Sophisticated, High-Technology Yet Two in Every Five College Students Wish They Had Been Better Prepared in Math And Science Before They Entered College**

- While a large majority (83%) of college students feel their generation has the preparation to work in industries that involve sophisticated, high-technology, when asked if they wished they had a stronger preparation in math and science before they entered college, 40% said "yes." Three in five felt they had not had the preparation they need. Students in less competitive colleges were more likely to say they would have liked a stronger preparation in math and sciences than students in highly competitive schools (52% vs. 33%).

### **A Large Majority of Students Feel the Next Generation Will Need Stronger Pre-College Math and Science**

- Seven in ten (72%) college students believe the next generation will need a stronger pre-college math and science education than they, themselves, received, including 28% who feel these students will need a "much stronger" math and science education.

### **A Vast Majority of College Students Believe Their Generation Holds the Next New Technology Breakthrough -- One in Four Believe They, Themselves, Could Be the Next Bill Gates**

- Eighty-six percent of the college students surveyed believe that someone in their own generation will become the next leader who will develop a new technology that will have a major impact on society. Asked if they could be this person, one in four who believes the leader will come from their generation say they, themselves, could be this person. Two-thirds among this group say they know someone who could become this person.

### **Ninety-Three Percent of College Students Believe It is Important for the Average American to Be Science Literate**

- Most college students believe it is important for average Americans to be science literate so that they can understand and deal with terrorist threats of a sophisticated, high-technology nature. Fifty-eight percent think this is very important and 35% say this is somewhat important. Few college students do not think science literacy is important.

## More Than Three in Every Five College Students Agree That Their Generation Will Be Less of a "Me" Generation and More Community-Conscious

- Nearly two-thirds (64%) of college students agree to some extent that their generation will be more oriented toward community well-being rather than themselves, but only nine percent "strongly agree." One in four disagrees.

<sup>1</sup>Baron's Competitive Ranking Identification



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