



# Institutional Research Reports

## University of Kentucky

Results of the New Freshman Survey  
April 2002

### A Fresh Look at First-Year Students: Results of the *New Freshman Survey*

The higher education community has shown growing interest during the past few years in the expectations, experiences, and concerns of first-year students. The volume of research on college freshmen has increased greatly since 1999. Institutional researchers have developed and administered several new assessment instruments on a nationwide basis. Educators have organized national conferences to spotlight the needs of new students. And institutions have formed regional and state consortia to promote in-depth evaluations of the first college year.

The recent attention showered on first-year students is understandable. Most institutions face rising pressures from accreditation agencies, governing boards, and state-wide coordinating bodies to increase their retention and graduation rates. At UK, roughly one in five freshmen does not return for a second year of college. Institutional research reveals that nearly half of the students who fail to earn a baccalaureate degree drop out either during or just after their first year at UK. Thus, a comprehensive plan to raise UK's graduation rates must entail interventions to stop the attrition of first-year students from our campus.

This edition of *UK Institutional Research Reports* presents selected findings from our *New Freshman Survey* administered during the first week of the fall semester.<sup>1</sup> Students were asked to report: impressions of their senior year in high school, coursework taken in school, participation in activities in and outside of the classroom, perceived gains in skills and knowledge during their senior year, personal feelings and life-shaping experiences,

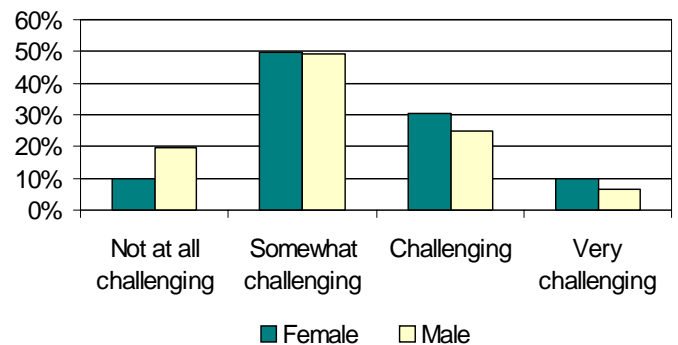
<sup>1</sup> A total of 2,004 students, 66% of all freshmen, completed the survey in their English 101 sections. The survey's margin of error was  $\pm 1\%$  at the 95% confidence level. Reported differences between groups of students are significant at  $p \leq .01$ , as determined by independent sample t-tests or chi-square tests.

academic and social expectations for their first year in college, and important demographic information not contained in their application files. Many of the survey findings were unanticipated and should provide policy makers with data needed to plan effective interventions for at-risk students. A second survey was administered recently to freshmen enrolled in English 102 to assess how students have changed as a result of their first year in college. The results of that survey will be reported in a future newsletter.

### *Readiness for College and Expectations for Success*

Responses to several items offer a revealing look at how first-year students evaluate the effectiveness of their preparation for college and rate their chances for a successful college career. The accompanying graph shows how students evaluated the academic challenge of their senior year in high school. In general, students report not being challenged by their studies. Nearly two-thirds (63.8%) indicated that their senior year in high school was either "somewhat challenging" or "not at all challenging."

**Perceived Academic Challenge of  
Senior Year in High School**



Male students reported experiencing significantly less challenge academically than females. In fact, twice as many male students as females indicated that their final year in high school was "not at all challenging" (19.5% versus 10%). Two explanations for this gender differ-

ence seem plausible. First, male high school students, on average, may be better prepared academically than females and are simply bored with the level that course material is presented.<sup>2</sup> Second, a substantial number of males may have mentally “checked out” during their senior year and are disengaged from the fabric of high school life.<sup>3</sup> The bulk of evidence described in the remainder of this newsletter supports the latter interpretation. This explanation gains currency when we consider that students placed on probation at the end of their first semester also reported being less academically challenged during their senior year than students who remained in good standing.

The lack of challenge experienced by many high school students is reflected in the number of hours students study. Seven of ten students (72%) reported spending five or fewer hours on “studying/homework” during a typical week. These statistics lend support to educators and policy makers concerned about the lack of academic rigor and productivity during the senior year. Last October, the National Commission on the High School Senior Year chaired by Kentucky Governor Paul Patton released its final report, *Raising Our Sights: No High School Senior Left Behind*.<sup>4</sup> The report found that many seniors experience their last year in high school as boring and repetitious. This is particularly true for students who have been accepted by a college during the middle of their senior year. The report recommends that, “Educators should work to provide the widest possible array of demanding educational alternatives for all students.” Options available to students range from vocational internships to enrollment in college courses for credit.

<sup>2</sup> Male high school students earn slightly higher composite scores than females (24.0 versus 23.2) on the ACT Assessment. This difference in test scores is statistically significant, but it does not indicate a meaningful gap in the academic preparation of males and females.

<sup>3</sup> This interpretation is consistent with survey findings from the Higher Education Research Institute at UCLA reported in a previous newsletter: <http://www.uky.edu/LexCampus/newweb/navirr.shtml>. Compared to male students, females report more time studying and participating in students clubs and activities while in high school.

<sup>4</sup> National Commission on the High School Senior Year (2001). *Raising Our Sights: No High School Senior Left Behind*. [http://www.commissiononthesenioryear.org/Report/FINAL\\_PDF\\_REPORT.pdf](http://www.commissiononthesenioryear.org/Report/FINAL_PDF_REPORT.pdf)

Interestingly, the lack of challenge and minimal homework demands associated with the senior year appear not to figure into students’ evaluations of their college readiness. A large majority—85% of all freshmen—rates their high school preparation for college as “effective” or “very effective.” Students’ assessments of their readiness for college are likely influenced by the grades they earn. Research conducted by ACT, Inc. provides compelling evidence of the subjective nature of grading practices and widespread grade inflation in recent years.<sup>5</sup> Our analysis of student records for Fall 2001 freshmen found that high school GPA’s for females and males were 3.41 and 3.29, respectively.<sup>6</sup> These GPA’s are fairly high, considering that ACT composite scores for UK freshmen are only slightly above national norms.<sup>7</sup> Taking our survey results at face value, we contend that today’s students are able to earn primarily A’s and B’s without devoting very much time to homework. No wonder many students come to believe: “Of course, I’m prepared for college. After all, I’m an ‘A’ student!”

To learn more about students’ expectations for success, we asked first-year students: “On a scale of 1 to 10 (with 1 being impossible and 10 being absolutely certain), what do you think your chances are of being successful at UK?” Student responses to this item were surprising. Roughly nine of ten students (86%) rated their chances of success as an 8, 9, or 10. Students’ high degree of confidence in their likelihood of success stands in sharp contrast to statistics compiled by our office. The most up-to-date institutional research puts the odds of graduating in six years from UK at less than six in ten.<sup>8</sup>

<sup>5</sup> Ziomek, Robert L. and Svec, Joseph. C. (1995). *High School Grades and Achievement: Evidence of Grade Inflation*. ACT Research Report Series 95-3.

<sup>6</sup> This gender difference is statistically significant and is consistent with data presented in the edition of *UK Institutional Research Reports* devoted to the “Academic Accomplishments of Women” released earlier this year: <http://www.uky.edu/LexCampus/newweb/navirr.shtml>.

<sup>7</sup> *The ACT Class Profile National Norms (2000-2001)* reports the national ACT composite score for 2000-2001 freshmen is 22.1 (SD = 4.5). The *ACT Retention/Attrition Analysis* report lists the average composite score for 2000-2001 freshmen at UK as 23.9.

<sup>8</sup> The graduation rate for the 1995 freshman cohort is 57.2%.

## Course-Taking Patterns

ACT, Inc. has provided compelling data for many years showing that students who have taken a core curriculum in high school are more likely to have higher ACT composite scores, freshman GPA's, and retention rates than students who have not taken the core curriculum. The ACT core curriculum consists of four years of English and three years each of math, science, and social studies. In 1999, the Council on Postsecondary Education (CPE) strengthened the Pre-College Curriculum (PCC) requirements in science and social studies to mirror the ACT core in Fall 2002. The CPE also will require baccalaureate degree-seeking students to take two years of a foreign language beginning in 2004.

We wanted to learn about the proportion of our incoming freshmen who take additional coursework in the natural sciences, mathematics, foreign languages, and social studies. The knowledge gained about students' course-taking patterns may one day be used to develop models of academic success, improve admission criteria, and help advisors communicate accurate expectations to students. The table below shows the percentage of students from different groups who reported taking a fourth year of coursework in four discipline areas.<sup>9</sup>

**Percentage of Students Taking  
Four Years of Coursework**

Student Group	Natural Sci.	Math	Foreign Lang.	Social Studies
Female	49%	84%	25%	35%
Male	48%	86%	15%	38%
White	49%	86%	20%	37%
African American	36%	78%	8%	32%
Other	58%	82%	41%	42%
1st Generation	39%	79%	20%	26%
Not 1st Generation	49%	86%	21%	38%
Probation	48%	81%	18%	37%
Not on Probation	49%	86%	21%	36%
<b>Overall</b>	<b>49%</b>	<b>85%</b>	<b>21%</b>	<b>37%</b>

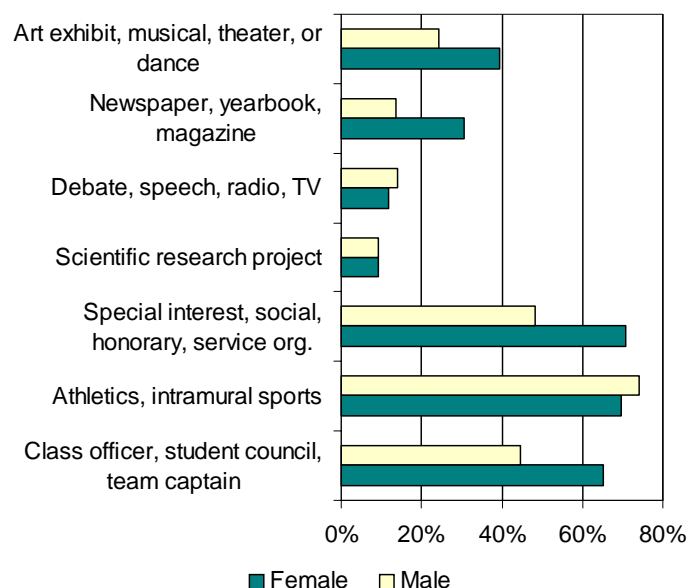
<sup>9</sup> We did not ask students to report the amount of coursework taken in English. The PCC requires all Kentucky students to take four years of this subject to be admitted to a bachelor's program at a public four-year university.

- *Natural Science* - African American students were somewhat less likely ( $p \leq .04$ ) than white students to take a fourth year of science. Compared to students from college-educated families, first-generation students were also somewhat less likely ( $p \leq .05$ ) to take a natural science course during their senior year.
- *Math* - Students placed on probation after their first semester were less likely to take a fourth year of math than students who remained in good standing. First-generation students were also somewhat less likely ( $p \leq .04$ ) to take a math course as seniors.
- *Foreign Languages* - Females reported taking more years of foreign language than males. Students of "other" races reported more years in this discipline area than white and African American students. White students were more likely to take a fourth year of foreign languages than African American students.
- *Social Studies* - First-generation students reported taking fewer years of social studies than their peers.

## Extra-Curricular Activities in High School

Several interesting gender differences emerged after examining students' involvement in extra-curricular ac-

**Participation in Volunteer, Non-Credit  
Activities During Senior Year**



tivities. The previous graph shows the percentage of students, by gender, who reported participating in volunteer, non-credit activities during high school. In general, females reported that they were more involved than males in school-related activities and projects.

Compared to males, a significantly greater percentage of female students indicated that they had participated in an “art exhibit or musical, theatrical, or dance production” and worked on the “school newspaper, yearbook, literary magazine or writing contest.” Females also were more likely to report being a “member of a special interest, social, honorary, or service organization” and serving as a “class officer, member of a student council, team captain, or officer of any type of school organization.” Males were somewhat more likely to be involved as a “member of an athletic team or active in intramural sports.”

These findings support the view that females are more active in extra-curricular activities and are more engaged in the high school experience. In a number of studies, students’ academic and social engagement has been positively correlated with increased learning, retention, and graduation rates. The Office of Assessment and Institutional Research plans to study whether these gender differences are sustained throughout students’ college careers at UK and assess their impact on persistence toward a degree.

**Estimated Time Devoted in a Typical Week to Selected Activities by Gender**

Activity	Less than 1 hour		1-5 hour	
	F	M	F	
Attending class	2%	3%	6%	
Studying	9%	26%	57%	
Clubs or groups	19%	40%	56%	
Household or childcare	31%	50%	56%	
Reading for pleasure	50%	62%	40%	
Socializing or partying	2%	5%	33%	
Exercising or sports	10%	9%	36%	
Watching TV	24%	18%	57%	
Playing video games	83%	45%	15%	
Working for pay	25%	26%	9%	

### *How Students Spent Their Time*

We asked students to report how much time they spent during a typical week on selected activities during their senior year in high school. The results offer an interesting look at students’ priorities and concerns. The table at the bottom of the page presents estimates of the amount of time female and male students spent on 10 different activities. Females reported spending significantly more time on studying/homework than males. It is worth noting that one-fourth (26%) of males and one in ten females (9%) indicated that they spent less than one hour per week on schoolwork. Females also reported more time devoted to student clubs/groups, household/childcare duties, and reading for pleasure. Males indicated that they spent more time on socializing/partying, exercising or sports, watching TV, and playing video/computer games.

These survey results are consistent with the results of a survey of college freshmen conducted by UCLA.<sup>10</sup> The 1999 survey sampled over 260,000 students at 462 two- and four-year colleges. Women reported significantly more time studying, participating in students clubs, and performing household/childcare responsibilities during their years in high school. Men indicated that they spent more time partying, watching TV, playing video games, and exercising and playing sports.

<sup>10</sup> Sax, L., Astin, A., Korn, W., & Mahoney, K. (1999). *The American Freshman: National Norms for Fall 1999*. Los Angeles: Higher Education Research Institute, UCLA.

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## ***First-Generation College Students***

Eight percent of first-year students (161 of 2,004) in our sample were identified as first-generation students based on responses to three questions about their family's educational attainment. First-generation students and other first-year students arrive at UK with comparable high school GPA's (3.41 vs. 3.39) and ACT Composite scores (23.4 vs. 23.8). Relative to other freshman, UK's first-generation college students were:

- twice as likely to come from Appalachian counties and half as likely to come from the Louisville Metro area;
- four times more likely to have family incomes at or below \$30,000 (32% versus 8%);
- less likely to rely on parents and relatives to fund their college educations and were more apt to rely on grants and scholarships;
- somewhat more likely to develop plans to work while they pursue their studies ( $p \leq .05$ );
- less likely to have taken additional years of high school coursework in social studies;
- more apt to make plans to visit home frequently on the weekends;
- less likely to make plans to join a fraternity or sorority; and
- less confident of their ability to succeed at UK.

Research on retention suggests that students who thrive socially are more likely to return for a second year of college. Clearly, it is too early to tell from our survey data whether first-generation students at UK will become integrated into the mainstream of campus life. However, we may be seeing warning signs from their reported plans to visit home frequently, their relative reluctance to join fraternities and sororities, and their plans to work longer hours while pursuing a college education.

## ***Students Placed on Academic Probation***

The Office of Assessment and Institutional Research identified students who completed the *New Freshman Survey* at the beginning of the academic year who were eventually placed on probation at the end of the Fall Semester. A total of 416 first-year students, 21 percent of our sample, experienced trouble academically after

their first term. A fairly detailed profile of at-risk students emerges from their survey responses. As a result of this survey, we have a much better appreciation for the demographic, academic, social, and—to some extent—psychological factors that distinguish academically at-risk students from their peers.

*Demographic Profile* - Males accounted for the majority of students placed on probation at the end of the fall term, despite comprising less than half of our sample. African American students and freshmen of “other” races were more likely to fall out of good standing than white students. First-generation college students were more likely than students from college-educated families to be placed on probation. Students with lower family incomes were also more likely than their peers to experience significant academic difficulties.

*Academic Preparation* - First-year students on probation were less prepared academically than students who remained in good academic standing after their first semester. They earned lower grades in high school and lower composite ACT scores. And they took fewer math and foreign language courses in high school. Freshmen on academic probation reported being less challenged academically during high school than students who stayed out of academic trouble. Moreover, they reported studying fewer hours in high school and were more likely to come to class without completing readings or assignments. Similarly, students on probation were less likely than other freshmen to report working “harder than you thought you could to meet a teacher's standards or expectations.”

*High School Activities* - Students on probation were less involved in extra-curricular and co-curricular activities. Compared to other freshmen, students in academic trouble were less likely to have participated on the school newspaper, yearbook, literary magazine. They also were less likely to have been members of a special interest, social, honorary, or service organization. And fewer of them reported having been a class officer, member of a student council, team captain, or officer of a school organization. Students on probation reported spending more time “socializing/partying” and playing video/computer games than other freshmen.



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*College Plans and Expectations* - Academically at-risk students claimed to be less nervous about leaving home for college than other first-year students. They reported being less worried about meeting new people and felt less isolated from others at their high school. Students who wound up on probation were more uncertain about joining a fraternity or sorority at UK. In addition, they were more likely to report plans to get a job and work relatively long hours during their first term. Students placed on probation at the end of their first semester were just as confident of their chances of success as their more academically successful peers. Interestingly, they were more likely than other first-year students to make plans to pursue a doctoral degree.

*Further Thoughts on Academically At-Risk Students* - At the risk of over-generalizing, perhaps the most salient impression we have of many freshmen on probation revolves around an unrealistic assessment of personal abilities, motivations, and expectations about college. Typically, students who get into trouble academically arrive at UK with weaker academic credentials than their classmates. They take fewer math courses in high school, a significant predictor of later academic success.<sup>11</sup> They report partying more and studying less during their senior year. Yet these at-risk students rate their high school preparation for college-level work no differently than their classmates. During their first semester, they are far more likely than other students in their class to make employment plans that call for longer work hours. But they are every bit as confident of their future success at UK as their better-prepared colleagues.

We are intrigued by the finding that students on probation are less nervous about leaving home to attend college. Clearly, the survey results indicate that these students are confident of their ability to meet new people and make friends. Perhaps, experiencing a moderate degree of apprehension at this juncture would be a healthy sign, for it would reflect the understanding that one is about to enter a new environment with unknown demands and expectations.

<sup>11</sup> "Finishing a course beyond the level of Algebra 2 (for example, trigonometry or pre-calculus) more than doubles the odds that a student who enters postsecondary education will complete a bachelor's degree." [Adelman, C. (1999). *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement.]

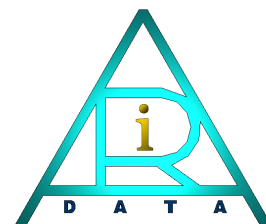
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### *Where do we go from here?*

The administration and analysis of the *New Freshman Survey* represents our initial effort to gather critical information on first-year students. Recently, we administered a follow-up survey to students in English 102 sections. The two surveys overlap one another in content and will allow us to compare changes in students' attitudes, expectations, and reported behaviors from the senior year of high school through the better part of the freshman year. We hope to identify the various factors that predict student success during the first year of college.

An important objective of both freshman surveys is to collect meaningful data that may be 'unpacked' by different campus organizations for their own assessment purposes. Sets of common questions across the two surveys have the potential to serve as performance indicators or markers for the Offices of Minority Affairs, Central Advising, and Admission. We shall furnish data on an annual basis to the coordinators of these programs. Similarly, our office plans to use clusters of survey items to evaluate the effectiveness of programs targeted at first-year students, such as the Freshman Discovery Seminars and Project Elevation.

Finally, our office plans to track changes in students' key attitudes and behaviors over the next decade and beyond. Understanding the evolving priorities and abilities of our newest students will enable us to be more responsive to their needs. Our expanded knowledge base will help us to gauge more effectively how students change and grow as they attempt to negotiate the changing landscape of postsecondary education. Consequently, we will be able to design new programs and interventions based on solid data rather than upon well-intended guesses about our students' needs.



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