THE COLLEGE OF 2020: STUDENTS

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EXECUTIVE SUMMARY

What is college? And why should I go? Those may be the defining questions for colleges over the next decade. More than an expression of teenage angst, they reflect a fundamental transformation in the way students see higher education, and how they want to go about getting it.

The traditional model of college is changing, as demonstrated by the proliferation of colleges (particularly for-profit institutions), hybrid class schedules with night and weekend meetings, and, most significantly, online learning. The idyll of four years away from home—spent living and learning and growing into adulthood—will continue to wane. It will still have a place in higher education, but it will be a smaller piece of the overall picture.

Students' convenience is the future. More students will attend classes online, study part time, take courses from multiple universities, and jump in and out of colleges. Students will demand more options for taking courses to make it easier for them to do what they want when they want to do it. And they will make those demands for economic reasons, too. The full-time residential model of higher education is getting too expensive for a larger share of the American population. More and more students are looking for lower-cost alternatives to attending college. Three-year degree programs, which some colleges are now launching, will almost assuredly proliferate. The trend toward low-cost options also will assuredly open doors for more inexpensive online options.

These changes, and the pressure they will put on colleges to adapt, are coming at a particularly acute time. While many jobs still do not require a college degree, nor will they in the future, most of the higher-paying, career-oriented jobs increasingly require a college degree as a means of entry or advancement. In other words, the product colleges are offering is in greater demand than ever. But impatience over how slowly colleges are changing is perhaps higher than ever, too. That is reflected in significantly higher enrollment levels at community colleges and for-profit colleges.

This report from Chronicle Research Services is based on reviews of research and data on trends in higher education, interviews with experts who are shaping the future of colleges, and the results of a poll of members of a Chronicle Research Services panel of admissions officials.

More and more students are looking for lower-cost alternatives to attending college.

What Will Have to Happen to Make Changes Possible?

Colleges that have resisted putting some of their courses online will almost certainly have to expand their online programs quickly. Many colleges are learning from the for-profit college industry that they must start courses and certificate programs at multiple times throughout the year. In addition, students now in elementary school are going to expect more connectivity and creativity from colleges.

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The conversion to more convenience for students will multiply over the next decade. To some degree, those situations are already happening, and they will be amplified as time goes on:

- Students will increasingly expect access to classes from cellular phones and other portable computing devices
- They may sign up to take a course in person, and then opt to monitor class meetings online and attend whenever they want.
- Classroom discussions, office hours with a professor, lectures, study groups, and papers will all be online.

Colleges will need to offer those options in addition to the face-to-face instruction. At the same time that many students are demanding more online options, some also want to learn the old-fashioned way—in classrooms. Some students recognize that they need the discipline of going to classes at set places and times, or they will never get around to studying. Some students may need more time to finish their degrees. Some colleges might accept that many high-school graduates are simply not ready for college and add a "new" first year to college educations that would be entirely remedial. Then students would be ready to start work toward a bachelor's degree.

Colleges must be ready to offer all of these options. **The challenge will be to provide them simultaneously and be flexible enough to change the methods as the market changes.** Faculty members must be flexible, too. The Internet has made most information available to everyone, and faculty members must take that into consideration when teaching.

There is very little that students cannot find on their own if they are inspired to do so. And many of them will be surfing the Net in class. The faculty member, therefore, may become less an oracle and more an organizer and guide, someone who adds perspective and context, finds the best articles and research, and sweeps away misconceptions and bad information.

Colleges are under immense pressure to change quickly because of intensified scrutiny of the cost of college. In addition, the pressure to adapt to instant access to information, and to ways to provide it, is being built right now by tomorrow's college students. **More than two-thirds of school districts in 2007-8 had at least one student who was taking an online course**, according to a recent report by the Sloan Consortium, a nonprofit organization that promotes online learning. What will those students expect from colleges when they get there? Certainly they will want something innovative—more innovative than what colleges are offering now.

Colleges are only slowly waking up to the need for substantial change. Admissions officers who are members of a *Chronicle* panel expect significant changes over the next decade in the makeup of their student bodies. Of the 121 institutions that responded to a survey, two-thirds said that almost all of their students were full time and ages 18 to 25. Those characteristics will change. Only about half the institutions believe that in 2020 their enrollments will be primarily made up of traditional-age, full-time students. By 2020, almost a third of respondents said, students will be taking up to 60 percent of their courses entirely online. Now almost no students at those colleges take courses only online.

Who Will the Students Be?

It should come as no surprise that student bodies will increasingly be made up of members of minority groups. **At some point, probably just after 2020, minority students will outnumber whites on college campuses for the first time.** The average age of students will keep trending higher as expectations shift in favor of people going back to college again and again to get additional credentials to advance their careers or change to new ones.

The colleges that are doing the best right now at capturing that demographic are community colleges and for-profit institutions. Both sectors will continue to grow at a fast pace. The executive director of the Career College Association, Harris N. Miller, believes for-profit colleges will be educating 15 percent of all college students by 2020**,** compared with the 7 percent that they educate now.

The average age of students will keep trending higher.

The most elite colleges will always have their constituencies and a ready supply of students looking for a traditional college education. Many flagship state institutions also have a similar built-in advantage: For students who cannot get into elite institutions or cannot afford them, the large, nearby public university will be their ideal. But the total group that attends those types of institutions makes up far less than half of collegegoers, and it is shrinking.

Community colleges and for-profit institutions should continue to thrive because of their reputations for convenience. The rest of colleges—regional public universities, small liberal-arts colleges, and private universities without national followings—can expect to compete for students based on price, convenience, and the perceived strengths of the institutions. They will need to constantly ask themselves "What is college?" and be constantly rethinking the answer if they want students to attend.

THE COLLEGE OF 2020: STUDENTS
21st-CENTURY LEARNERS

Today's high-school students, the so-called New Millennials, see their educational futures built almost entirely around technology. And certainly computers will be even more central to the educations of younger students now rising through elementary and high schools.

Two reports—one recent, and one nearly five years old but still prescient—help tell the story of the next generation of collegegoers, at least traditional-age college students. They are restless with the traditional forms of learning and eager to incorporate into their educations the electronic tools that have become omnipresent in their lives: their smartphones, laptop computers, iPods, and MP3 players.

Their visions for what they want from their education are concepts educators might criticize but cannot afford to dismiss. **Educators are increasingly finding that students want to design their own curricula and find ways to learn in their own style.** Colleges that attempt to cram their styles down students' throats on the basis that it is "good for them" may quickly find themselves uncompetitive in the new higher-education universe.

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The "Speak Up 2008" report, released in March 2009, concluded that the nation's kindergarten-through-12th-grade students "are in fact a 'Digital Advance Team' illuminating the path for how to leverage emerging technologies effectively for teaching and learning."

The report—published by Project Tomorrow, a California-based education nonprofit group—is based on a survey of 281,000 students in all 50 states. The report says that elementary- and secondary-school students are frustrated by rules that inhibit their use of technology. And the students propose that schools stop trying to block the technology and instead embrace it.

Among the recommendations in "Speak Up 2008":

1. **Use mobile computing devices "to extend learning beyond the school day."**

   If free to do so, about one-half of middle- and high-school students would use mobile devices to communicate with classmates, work with classmates on projects, conduct Internet research, and receive alerts about upcoming homework and tests. Approximately one-third would communicate with teachers, play educational games, or record lectures.

2. **"Incorporate Web 2.0 computing tools into daily instruction, especially those that develop collaborative or social-based learning, and provide unique opportunities for students to be content developers."**

   Twenty percent of sixth- through 12th-graders use the Web to write collaboratively with others. One-third or more of middle-school and high-school students play online games; share photos, videos, or music; and create new videos, music, or animation. Just under one-fifth of those students contribute to blogs.

3. **Create a new "digital textbook" that would allow students to do the following:**

   - Personalize the book with electronic highlights and notes.
   - Take quizzes and tests on their own.
   - Include links to real-time data or the expertise of an online tutor.
   - Link to PowerPoint presentations of class lectures.
   - Explore concepts through games or simulations
   - Watch video clips about topics they are studying.

4. **"Get beyond the classroom walls and make learning truly experiential."**

   Just under one-half of the middle-school- and high-school-student cohort in the survey want to talk to professionals in the field in order to learn about future jobs and careers and to gain experience through part-time jobs.

Designing the Perfect Learning Tool

A similar report, "Visions 2020.2," based on a survey sponsored by the U.S. Department of Commerce, the Department of Education, and a nonprofit organization in California, NetDay, asked 160,000 students in kindergarten through 12th grade in 2004 how they use digital technologies. By combining the most popular elements of the survey answers, NetDay created **a futurist vision of what the learning tools of the elementary- or secondary-school student of 2020 will look like:**

> Every student would use a small, handheld wireless computer that is voice activated. The computer would offer high-speed access to a kid-friendly Internet, populated with Web sites that are safe and designed specifically for use by students with no pop-up ads. Using this device, students would complete most of their in-school work and homework, as well as take online classes both at school and at home. Students would use the small computer to play mathematics-learning games and read interactive e-textbooks. In completing their schoolwork, students would work closely and routinely with an intelligent digital tutor. In their history studies, students could participate in 3-D, virtual-reality-based historic re-enactments.

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The college student of 2020 will be the grown-up version of this characterization. She will crave personalization and convenience. **Many of the students who completed the survey suggested that learning should be personalized based on the students' desires and how they learn best.** Some students are visual learners, some are auditory, others are experiential, and many are a combination of all three. In the future, those learning styles will become more important, and students will have the option to choose the way in which they

want to learn or take a course.

How Secondary Schools Can Better Prepare Students

Students and their parents expressed dissatisfaction with the way they were being prepared in high school for higher education. According to the "Speak Up 2008" survey:

While 56 percent of school principals say their schools are doing a good job of preparing students for the jobs of the future, only one-third of students, and an even lower percentage of parents, agree.

More than half of parents said they are likely or very likely to encourage their child to pursue a job in a science, math, or technology field. More than 40 percent of students in grades three to 12 agree that science is important to them. However, only 21 percent of high-school students and 17 percent of middle-school students say they are "very interested" in pursuing a career in those fields. An additional one-third say they might be interested if they knew more about such jobs and careers.

Remember, the freshman of 2020 is a first grader today. Market research from commercial producers describes an even more technology-savvy group coming up behind the students now in middle school and high school.

Research by the NPD Group shows that 82 percent of children ages 2 to 5 play games on video-game consoles. Kids have shown increased use of portable digital music or video players in the last year, but, surprisingly, use of cellular phones by kids has been stagnant for the last two years, according to the market-research company, based in Port Washington, N.Y. Twenty-six percent of sixth and seventh graders go online after seeing an advertisement. Increasingly, children are using their gaming consoles to watch movies. "From the perspective of anyone over the age of 30, I think the sheer prevalence of digital devices in kids' lives is at the same time eye-opening and something that was expected and confirmed," said Anita Frazier, an analyst at NPD (quoted in *Advertising Age,* January 19, 2009).

Other reports show that primary and secondary schools are

rapidly incorporating online courses into their mainstream curriculums.

The Sloan Consortium, in a January 2009 report on online education, found that 69.8 percent of the school districts responding to its survey had at least one student who had taken an online course in 2007-8. An additional 12.3 percent of those districts that did not have any students enrolled in an online course planned to have at least one student taking one within the next three years.

Ways to Think About the Data

Students' prevalent use of online research suggests that colleges will have an increasing need to break students of bad habits and help them assess the veracity of information on the Web. That practice also suggests that plagiarism will be a continuing and growing problem.

The migration of most learning to computers may lead to a new kind of "dispersed university," with students working in their own homes. All teaching and monitoring of progress and quality would take place online. That leads to a profound question for college leaders: Why go to a bricks-and-mortar college, except for the socialization, when virtually all learning takes place online? Obviously, the savings to parents and students could be significant. Colleges need to be thinking about what value they are adding to a student's learning.

How will the faculty member keep up with those rapid changes in technology and expectations of technology? Students are making great leaps in the use of the technology, but faculty members, for the most part, limp far behind. To be fair, little or nothing is done to reward teachers on most campuses for their technological savvy. Will Ph.D. programs finally have to prepare graduates for modern teaching? How else will colleges get faculty members up to speed?

THE COLLEGE OF 2020: STUDENTS
THE PIPELINE

The population of the United States is projected to grow by about 10 percent from 2010 to 2020 (national population projections, released in 2008 by the U.S. Census Bureau). But the Western Interstate Commission for Higher Education projects that the total number of high-school graduates will be virtually unchanged during that period. The locale of the graduates will simply shift around the country.

The total number of high-school graduates will be virtually unchanged from 2010 to 2020.

Regional Differences

These shifts exacerbate the problem of attracting students for colleges in areas of declining teenage population but ameliorate it in other places. **The location of a college, and the geographic spread of its influence and recruiting area, will be the most significant factor in determining its flow of enrollees in the next decade.**

Here's a regional breakdown, as described in projections by the Western Interstate Commission for Higher Education:

- The Northeastern states will see a consistent decline in graduates of about 1 percent per year.
- In the Midwest, the number of graduates will fall by about 8 percent by 2014-15. Thereafter, the number of graduates is projected to fluctuate.
- In the West, the peak for high-school graduates was reached this spring. A slow decline will begin that will last until 2014-15. Thereafter, the number of graduates in the West will begin climbing again.
- The South will be completely different from the rest of the country. The number of graduates will consistently increase, and there will be 9.4 percent more graduates in 2020-21 than in 2008-9.

Table 1: High School Graduates by Region, 2008-09 and 2020-21

	Public	Nonpublic	Total
2008-9			
West	749,214	53,853	803,066
Midwest	702,238	67,118	769,355
Northeast	530,282	84,810	615,092
South	1,035,746	95,959	1,131,705
2020-21			
West	791,450	51,979	843,429
Midwest	667,943	58,706	726,649
Northeast	482,916	71,929	554,845
South	1,136,866	101,722	1,238,588

Source: Western Interstate Commission for Higher Education

Racial and Ethnic Breakdown

The racial makeup of the high-school graduating classes will also be important as colleges plan their recruiting. The numbers of white non-Hispanic and black non-Hispanic graduates will decrease in almost every year until 2021-22. Those decreases will be offset by increases in the numbers of Hispanic and Asian/Pacific Islander graduates. The projected result is that white, non-Hispanic high school graduates are expected to decline toward 50 percent of the graduating class, but won't quite reach that mark by 2021-22.

Table 2: Projections of High-School Graduates by Race/Ethnicity, 2009-10 to 2021-22

	TOTAL	American Indian/ Alaska Native	Asian/Pacific Islander	Black non-Hispanic	Hispanic	White non-Hispanic
2009-10	2,966,572	34,045	165,313	437,524	504,504	1,825,187
2010-11	2,935,303	33,276	169,153	435,571	525,772	1,771,531
2011-12	2,884,663	32,687	173,494	420,388	535,197	1,722,896
2012-13	2,886,474	32,202	178,629	413,401	558,995	1,703,247
2013-14	2,853,990	32,295	183,798	395,721	568,166	1,674,011
2014-15	2,858,933	32,455	188,103	396,466	587,438	1,654,471
2015-16	2,890,867	33,252	190,828	403,355	608,808	1,654,625
2016-17	2,911,412	33,632	195,298	403,074	630,685	1,648,723
2017-18	3,003,493	34,777	220,200	413,920	671,774	1,662,821
2018-19	2,983,381	34,794	220,566	402,427	701,153	1,624,442
2019-20	2,988,357	35,006	231,987	394,345	723,204	1,603,816
2020-21	3,042,408	35,124	240,568	393,471	752,705	1,620,540
2021-22	3,041,417	35,187	244,143	393,363	780,268	1,588,455

Source: Western Interstate Commission for Higher Education

Over all, the likelihood that a high-school freshman will enroll in college by age 19 improved modestly—from 39 percent to 42 percent—between 2000 and 2008, according to "Measuring Up 2008: The National Report Card on Higher Education," published by the National Center for Public Policy and Higher Education.

The overall high-school completion rate has been dropping for the past two decades.

However, with a growing number of minorities, that trend cannot continue unless high-school graduation rates go up sharply. The high school completion rate has been a hotly debated topic among researchers, because of wildly variable estimates. However an authoritative 2007 study, which sought to combine other estimates, found that the high school graduation rate had fallen steadily from 82.9% in 1980 to 77.5% in 2000, the latest statistics available. Differences among ethnic groups have persisted for decades. In 2005, the rate for African-Americans was 69.1 percent, the rate for Hispanics was 72.3 percent, and the rate for whites was 80.2 percent.

Once students get to college, there are similarly yawning gaps among the rates of completion for most minority students. Over all, 59 percent of white students complete a bachelor's degree within six years of enrolling, but only 47 percent of Hispanics, 41 percent of African-Americans, and 39 percent of American Indian students accomplish the same thing, according to the "Measuring Up 2008" report.

The continuing diversification of the college-going population will put pressure on many aspects of postsecondary education to adapt. Colleges will have to pay more attention to what factors will allow members of different ethnic groups to succeed, especially because the fastest-growing group (Hispanics) has historically low rates of college attendance. (The other fast-growing group, Asians, has historically high patterns of attendance.)

Financial Stratification

Financial status has long been an accurate predictor of college attendance. Ninety-one percent of high-school students from families in the highest income group (more than $100,000) enroll in college, according to a 2007 study by the National Center for Education Statistics. The enrollment

rate for students from middle-income families ($50,001 to $100,000) is 78 percent, and for those in the lowest income group ($20,000 or less), it is 52 percent.

Many minority families are in the low end of the income scale. Among the ethnic groups, black households had the lowest median income in 2007 ($33,916), according to U.S. Census Bureau figures. That compares with a median of $54,920 for non-Hispanic white households. Asian households had the highest median income ($66,103). The median income for Hispanic households was $38,679.

It isn't that students don't want to go to college. In a 2007 poll cited in "A Voice from the Middle," a report from the National Association of Secondary School Principals, Phi Delta Kappa International, and the Lumina Foundation for Education, 92 percent of middle-school students said they "definitely or probably" would attend college. **It's just that they don't know how to go about it.**

The students polled were asked, "How much do you know about the courses or classes that are required to graduate from high school?" They answered:

Know a lot: 17%
Know a little: 58%
Don't know anything: 25%

Many students and their parents have unrealistic visions about how they will pay for college. A recent study by OppenheimerFunds, for example, found that Hispanic families place a higher value on higher education than other races and think their children will attend college. In the poll, 72 percent of Hispanic families believe higher education is within reach for anyone who wants it, compared with 63 percent of non-Hispanics. Here's the disconnect: More than three-quarters of Hispanic families want to pay for at least half of their children's college costs. But 37 percent of those families had saved less than $1,000 for college costs; 12 percent hadn't saved anything.

More than three-quarters of Hispanic families want to pay for at least half of their children's college costs. But 37 percent of those families had saved less than $1,000 for college costs.

What might colleges do about this? They might want to consider stronger outreach to high-school guidance offices to be sure students are getting good, realistic information about what will be required of them academically and financially. Many colleges have found that as they try to increase the

attendance of minority students, they have to offer larger amounts of financial aid.

But that won't be enough. **If colleges expect to increase attendance, they also need to look into the high-school dropout population.**

As mentioned above, the proportion of dropouts has been getting greater, nor smaller, in the last two decades. President Obama has set a goal of pushing the college-completion rate in the United States ahead of all other countries by 2020. (The nation now ranks 15th out of 29 nations compared by the Organization for Economic Cooperation and Development, as cited in the "Measuring Up" report.) There is little chance that he can accomplish that without high schools and colleges figuring out ways to reach and educate those who have given up.

The report "Diplomas Count: School to College: Can State P-16 Councils Ease the Transition?" gives alarming statistics about the number of high-school dropouts in each state:

"Nearly 1.23 million members of the public high-school class of 2008 will fail to graduate with a diploma. That amounts to a loss of 6,829 students from the U.S. graduation pipeline per day. With 900 students lost daily, California—the country's most populous state and the largest source of leakage from the graduation pipeline—accounts for one out of every eight nongraduates in the nation," the report says. (See table on following page.)

Table 3: Projections of High School Graduates and Non-graduates, 2008, by State

	9th-grade enrollment 2004-5	Projected graduates 2007-8	Projected nongraduates 2007-8	Total students lost each school day
AL	64,505	39,520	24,985	139
AK	11,934	8,069	3,865	21
AZ	74,445	54,593	19,852	110
AR	38,225	27,965	10,260	57
CA	540,669	378,751	161,918	900
CO	64,383	47,743	16,640	92
CT	44,634	34,870	9,764	54
DE	10,706	6,435	4,271	24
DC	4,570	2,633	1,937	11
FL	248,943	151,444	97,499	542
GA	141,984	82,474	59,510	331
HI	16,971	11,435	5,536	31
ID	21,217	16,263	4,954	28
IL	176,606	135,538	41,068	228
IN	86,901	63,981	22,920	127
IA	40,876	33,843	7,033	39
KS	39,054	29,011	10,043	56
KY	56,661	40,501	16,160	90
LA	58,589	32,069	26,520	147
ME	16,759	12,945	3,814	21
MD	81,270	59,780	21,490	119
MA	64,321	48,023	16,298	91
MI	153,729	108,424	45,305	252
MN	68,889	53,784	15,105	84
MS	40,118	24,796	15,322	85
MO	78,089	59,752	18,337	102
MT	13,147	9,956	3,191	18
NE	25,129	19,998	5,131	29
NV	36,056	16,369	19,687	109
NH	18,564	14,320	4,244	24
NJ	110,862	92,388	18,474	103
NM	30,134	16,297	13,837	77
NY	261,936	178,031	83,905	466
NC	125,375	84,013	41,362	230
ND	8,524	6,753	1,771	10
OH	157,212	119,355	37,857	210
OK	49,977	35,366	14,611	81
OR	45,612	32,126	13,486	75
PA	156,169	125,591	30,578	170
RI	12,722	9,047	3,675	20
SC	64,175	35,697	28,478	158
SD	10,311	7,800	2,511	14
TN	80,890	52,908	27,982	155
TX	374,403	256,312	118,091	656
UT	37,352	29,367	7,985	44
VT	8,528	6,839	1,689	9
VA	107,753	78,558	29,195	162
WA	89,781	61,780	28,001	156
WV	24,033	17,503	6,530	36
WI	76,042	61,178	14,864	83
WY	7,219	5,358	1,861	10
US	4,176,954	2,947,677	1,229,277	6,829

Source: EPE Research Center 2008: From Diplomas Count 2008: School to College: Can State P-16 Councils Ease the Transition?

Ways to Think About the Data

All the population trends show the significant increase in Hispanics and African-Americans, but, unless secondary education improves greatly, colleges of all kinds will need to admit and work with greatly underprepared students of color. In fact, some colleges should consider explicitly offering a five-year curriculum, with the first year being remedial.

In selling the value of college to less-wealthy students, colleges should emphasize how a college degree affects household economics. Without a college degree, 45 percent of adult children with parents in the lowest-income quintile remained in the bottom quintile. However, 41 percent of adult children from the bottom quintile made it to the top two quintiles if they earned a college degree.

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COLLEGE POPULATION

The U.S. Department of Education has projected college enrollments through 2017. While overall numbers are trending significantly upward, the characteristics of the student body are changing significantly, as the following tables show. **The student body is getting older, it will be even more heavily weighted toward women, and while the enrollment is projected to grow faster at private institutions, that is probably because for-profit colleges are private.**

The Education Department cautions that the enrollment projections do not take into account such factors as the cost of a college education and the impact of distance learning because of technological changes. Projections quoted are based on National Center for Education Statistics middle alternative projections. These projections were published before the current recession took full effect. This year, many public four-year and two-year colleges are seeing large increases in numbers of applicants, which most admissions officials believe is because of the lower cost of public institutions.

Table 4: Actual and Projected Fall Enrollment in Degree-Granting Institutions, by Age: Selected Years, 1990-2016

In thousands							
Age	1990	1995	2000	2005	2007[1]	2010[1]	2016[1]
Total	**13,819**	**14,262**	**15,312**	**17,487**	**17,958**	**18,839**	**20,442**
14 to 17 years old	177	148	145	199	178	177	190
18 and 19 years old	2,950	2,894	3,531	3,610	3,812	4,018	4,010
20 and 21 years old	2,761	2,705	3,045	3,778	3,904	4,203	4,299
22 to 24 years old	2,144	2,411	2,617	3,072	3,109	3.277	3,715
25 to 29 years old	1,982	2,120	1,960	2,384	2,533	2,688	3,168
30 to 34 years old	1,322	1,236	1,265	1,354	1,337	1,443	1,741
35 years old and over	2,484	2,747	2,749	3,090	3,086	3,034	3,319

Source: National Center for Education Statistics, U.S. Department of Education
Note: Figures my not add up because of rounding
1. Projected

Note that the overall college enrollments continue to go up, but there is a gradual aging of the collegegoing population. In 2000, 60 percent of college students were ages 18 to 24, and 21.1 percent were ages 25 to 34. In 2016, 58.8 percent will be 18 to 24, and 24 percent will be 25 to 34.

From 2007 to 2016, the population of college students ages 18 to 24 will increase by 11.1 percent, but the population of students ages 25 to 34 will increase by 26.8 percent.

Table 5: College Enrollment Projections, by Type of Institution

	In thousands: includes all degree-granting and ages				
	Public, 4-year: Projected numbers for enrollment				
		Men		Women	
Year	Total	Full-time	Part-time	Full-time	Part-time
2009	7,204	2,455	753	2,872	1,125
2017	7,874	2,614	850	3,184	1,226
	Public, 2-year: Projected numbers for enrollment				
2009	6,544	1,136	1,611	1,410	2,387
2017	7,068	1,187	1,771	1,557	2,553
	Private, 4-year: Projected numbers for enrollment				
2009	4,356	1,437	419	1,836	664
2017	4,801	1,546	476	2,053	727
	Private, 2-year: Projected numbers for enrollment				
2009	312	106	13	162	31
2017	337	110	14	179	33

Source: National Center for Education Statistics, U.S. Department of Education
Note: Figures may not add up because of rounding

From 2007 to 2016, the population of college students ages 18 to 24 will increase by 11.1 percent, but the population of students ages 25 to 34 will increase by 26.8 percent.

Note that the growth rate is faster among private institutions (10 percent) than public institutions (8.7 percent). However, keep in mind that the fastest-growing sector in higher education, for-profit institutions, are private. Also, **much of the growth at private colleges is due to new or expanded programs for adults. About one of four undergraduates enrolled at private colleges is older than 24.**

Table 6: Projections of Degrees Conferred, 2008-9 and 2017-18

	Bachelor's degrees		
Year	Total	Men	Women
2008-9	1,603,000	675,000	928,000
2017-18	1,730,000	723,000	1,007,000
	Associate degrees		
2008-9	731,000	277,000	454,000
2017-18	773,000	290,000	483,000

Source: National Center for Education Statistics, U.S. Department of Education

Table 7: Enrollment Projections by Full-Time-Equivalent Enrollment, 2009 and 2017

	In thousands: all degree-granting institutions, all ages				
		Public		Private	
Year	Total	4-year	2-year	4-year	2-year
2009	13,928	6,057	3,888	3,697	286
2017	15,180	6,606	4,196	4,069	309

Source: National Center for Education Statistics, U.S. Department of Education

Table 8: Enrollment Projections, by Age, 2009 and 2017

	In thousands	
	2009	2017
Total enrollment	18,416	20,080
14 to 17 years old	190	211
18 to 19 years old	4,023	3,960
20 to 21 years old	3,803	3,958
22 to 24 years old	3,325	3,753
25 to 29 years old	2,564	3,035
30 to 34 years old	1,465	1,813
35 years old and over	3,047	3,350
Men	7,929	8,568
14 to 17 years old	81	85
18 to 19 years old	1,831	1,787
20 to 21 years old	1,743	1,790
22 to 24 years old	1,526	1,692
25 to 29 years old	1,135	1,342
30 to 34 years old	586	729
35 years old and over	1,026	1,144
Women	10,487	11,512
14 to 17 years old	109	127
18 to 19 years old	2,192	2,174
20 to 21 years old	2,060	2,169
22 to 24 years old	1,798	2,061
25 to 29 years old	1,429	1,692
30 to 34 years old	879	1,084
35 years old and over	2,020	2,206
Full-time, total	11,413	12,430
14 to 17 years old	131	150
18 to 19 years old	3,361	3,339
20 to 21 years old	3,070	3,234
22 to 24 years old	2,182	2,515
25 to 29 years old	1,292	1,554
30 to 34 years old	623	786
35 years old and over	754	852

Source: National Center for Education Statistics, U.S. Department of Education

Note: Figures may not add up because of rounding

Ways to Think About the Data

The aging of students will force colleges to fundamentally rethink how they approach adult students. At many colleges, adult students are extras, or "cash cows," who pay tuition but don't tax the college infrastructure: They don't sleep in the dorms, participate in a meal plan, use the library very much, or demand much in the way of programming or activities. Colleges have still not spent enough time thinking about ways to make adult students more integral to their campuses, or creating basic services just for them, like lounges, places they can store belongings, and evening snack shops.

THE COLLEGE OF 2020: STUDENTS
TUITION TRENDS

Colleges face a lot of headaches integrating technology into teaching, making schedules more flexible and consumer oriented, and finding new courses and approaches that appeal to a changing student body. But perhaps **no problem is more vexing than the reality that college is increasingly unaffordable for most people.**

The rate of increase in college tuition has outpaced the rise in the cost of living and in family income for decades. It may surprise many people to know that the rate of increase has been closer to the inflation rate at private colleges in the last decade than it was in the two previous decades. **The largest increases in tuition compared with inflation in the last decade have been at public four-year institutions.** That has been a concerted effort: Most states have gradually lessened their support for public institutions, all but forcing the colleges to charge their students more. That policy has fanned the public debate. It may be that as those once-inexpensive institutions are getting less affordable, the pressure on colleges to reform their costs is increasing even more.

These trends in tuition from 2008 were compiled by the College Board:

- Over the past decade, published tuition and fees have risen at private four-year colleges by an average annual rate of 2.4 percent after inflation, compared with 2.9 percent in the preceding decade, and 4.1 percent from 1978-79 to 1988-89.

- Over the past decade, published tuition and fees have risen at public four-year institutions by an average rate of 4.2 percent per year after inflation, compared with 4.1 percent in the preceding decade, and 2.4 percent from 1978-79 to 1988-89.

- Over the past decade, published tuition and fees have risen at public two-year colleges by an average rate of 1.4 percent per year after inflation, compared with 3.5 percent in the preceding decade, and 3.1 percent from 1978-79 to 1988-89.

- On average, full-time students receive grants and tax benefits worth about $10,200 at private four-year institutions, $3,700 at public four-year institutions, and $2,300 at public two-year colleges.

The following table, taken from "Measuring Up 2008," shows how public colleges, generally the least expensive option for college, have become an increasing financial burden, particularly for lower income families, in an age of wage stagnation:

Table 9: Net College Costs as a Percentage of Median Family Income

Public, 4-year	**1999-2000**	**2007-8**
Lowest income quintile	39%	55%
Lower-middle income quintile	23%	33%
Middle income quintile	18%	25%
Upper-middle income quintile	12%	16%
Highest income quintile	7%	9%
Public, 2-year		
Lowest income quintile	40%	49%
Lower-middle income quintile	22%	29%
Middle income quintile	15%	20%
Upper-middle income quintile	10%	13%
Highest income quintile	6%	7%

Source: National Center for Public Policy and Higher Education

*Net college costs defined as tuition, room, and board minus financial aid.

If left unchecked, the cost of attendance each year at the most expensive private colleges would easily exceed $70,000 by 2020. Fewer families can afford the cost of the highest-priced private colleges, and some of those colleges cannot keep giving the aid that makes them affordable and continue to balance their budgets.

Home-equity lines of credit used to be a major source of college financing for parents, but not any more. Between foreclosures and real-estate deflation, that source is gone. Perhaps more serious for middle-tier colleges, studies show that higher-income families are less likely to pay a premium for a second tier or lower college. In a recent large survey by GDA Education Research, half of the highest-income parents of collegebound students said that the cost of college was the most important factor in their child's choice of a college. Two years ago, only 15 percent of the higher-income families said cost was the greatest factor.

Higher-income families are less likely to pay a premium for a second tier or lower college.

However, tuition discounting remains an important attraction for private colleges. The average discount at a small private college is about 42 cents on the dollar, according to the 2007 survey of the National Association of College and University Business Officers. In other words, a student, on average, is only paying 58 percent of the "sticker price." There is psychology at work. Students still want to attend a $40,000-a-year private college even if they only have to pay $23,200. For many students and parents, high cost still signals higher quality. The question is how much longer colleges can continue discounting at that level.

"There's a cultural transformation that has to take place. The economics are all screwed up, and it is not serving the needs of the country," said Patrick M. Callan, president of the National Center for Public Policy and Higher Education, in an interview with Chronicle Research Services. His group's biennial report, "Measuring Up 2008: The National Report Card on Higher Education," has been documenting increasing college costs.

To bring about lasting change, said Mr. Callan, there will have to be a public outcry. He said polling by his organization shows that **public anxiety over the cost of college is at its highest level ever.** That worry is combined with the realization that higher education is increasingly a necessity in modern society, rather than a luxury, if a person wants to live a better life than his or her parents. (That is still a popular perception even though the Bureau of Labor Statistics reports that only 39 percent of the jobs in the 10 fastest-growing occupations from 2006 to 2016 will require a college degree.)

If traditional colleges cannot keep costs affordable, other college models will take their place, Mr. Callan said. Online institutions can keep costs low, and appeal to a wide cross section of students, he said. He thinks the most successful colleges will combine online learning with classroom instruction, because younger students in particular need the structure and discipline of a classroom if they are going to learn.

Student Loans

To the extent that colleges have increased financial aid, much of it is in the form of loans. The result has been that students are graduating with more debt than ever before. According to the College Board:

- After two years of slow growth, federal education-loan volume increased by 6 percent in inflation-adjusted dollars between 2006-7 and 2007-8. Subsidized Stafford Loans increased by 11 percent, unsubsidized loans grew by 6 percent, and PLUS Loans grew by 1 percent. Perkins Loans declined by 33 percent.

- Estimates from the Annual Survey of Colleges indicate that for the approximately 60 percent of 2006-7 bachelor's degree recipients who graduated with debt, the average total debt was about $22,700.

Table 10: Average Debt Per Student Borrower by Type of Institution in Constant (2007) Dollars

	2000-1	2006-7
Public 4-year	$17,400	$18,800
Private, nonprofit	$20,100	$23,800
For-profit	$20,400	$38,300
All 4-year	$19,300	$22,700

Source: The College Board

Note: Amounts are expressed in constant 2007 dollars

Ways to Think About the Data

Colleges should consider new ways to repackage student aid. More colleges have been offering larger work-study grants. If students can effectively fill jobs, a college can conceivably cut costs and instill a sense of responsibility in students. Some colleges are reluctant to do this, convinced that hours spent on a job are cutting into hours a student should be spending studying. However, more students are reporting in surveys that they expect to work in outside jobs while in college. According to a recent survey by the admissions consulting firm Noel-Levitz, almost 50 percent of students at community colleges expect to work more than 20 hours a week. Twenty-six percent of students at private four-year institutions and 17 percent of students at public four-year institutions expect to work more than 20 hours a week.

The price-tag race among private colleges may be nearing its end. Some private colleges have drastically slashed their tuitions (Muskingum College, for example) to reflect the fact that the average student is paying only about 58 percent of the sticker price. Other private colleges have believed that they had to hang on to a higher price tag because consumers see the price as an indicator of quality. With the prices of public institutions rising more rapidly than those of private colleges, some private institutions might be entering an era when they can compete effectively on price, emphasizing that for a slightly higher price, they offer smaller classes and more one-on-one attention, among other qualities.

THE COLLEGE OF 2020: STUDENTS
FOR-PROFIT COLLEGES

The for-profit sector in higher education is growing at a pace that far outstrips that of higher education as a whole. Its colleges are typically quite expensive, and many students graduate from them with debt that exceeds the debts incurred by graduates of traditional colleges (see Table 10), but the for-profit colleges have made up for that with a no-frills, results-oriented education plan that appeals to older students in particular.

Annual enrollments at for-profit colleges between 2003-4 and 2005-6 increased by 17 percent in programs of less than two years, 22 percent in two-to-four-year programs, and 14 percent in programs of four or more years, according to the 1,400-member Career College Association.

The University of Phoenix now has nearly 400,000 students. Its parent company has revenue of $3-billion.

Investors have been very bullish on companies in this industry, particularly the largest, the Apollo Group, the parent company of the University of Phoenix, by far the largest university in the nation. It is easy to see why: **The Apollo Group's revenue grew 25.3 percent in the six months ending February 28, 2009,** compared with the same period a year earlier. **The company is on pace for revenue in excess of $3-billion in the current fiscal year.** The University of Phoenix now has nearly 400,000 degree-seeking students.

Opportunities for Growth

The for-profit industry sees great opportunities for more growth. Six of the 10 occupational categories that are expected to grow the fastest between 2006 and 2016, according to the U.S. Bureau of Labor Statistics, require less than a four-year degree. While the government forecasts that job opportunities requiring a four-year degree will increase 17 percent during that time period, it also estimates that job opportunities requiring a two-year degree will increase 19 percent, according to statistics compiled by the Career College Association.

For-profit colleges are now eyeing a new possible market: employers that will accept multiple certificates, or effective but noncredit online training, as prerequisites for employment, rather than degrees. That is an area for-profit colleges could

dominate quickly if it became popular.

The for-profit colleges also acknowledge that they are beneficiaries of difficult economic times, because that is when students historically have gone back to college to burnish their skills or obtain new ones. "While we cannot quantify the significance of the current economy on our growth, we believe we are experiencing a positive impact," said the Apollo Group's then-chief executive, Charles B. "Chas" Edelstein, in January, following release of the previous quarter's financial statement.

Using the momentum brought on by the recession, the company beefed up its promotional spending to $228.6-million in the quarter, a 29-percent increase over a year earlier, in an effort to lure students, reported Forbes Online in January.

"**The public view has shifted toward a more utilitarian view of higher education**," said Harris N. Miller, president and chief executive of the Career College Association, in an interview with Chronicle Research Services. "People are much more often asking, 'What is the return on investment in higher education for me personally, and for society in general?'"

Thirty-seven percent of students at for-profit colleges are minorities.

For-profit-college students are predominantly working adults. According to statistics compiled by the Career College Association**,** the colleges are serving populations that other colleges are having a hard time reaching.

- Thirty-seven percent of students at for-profit colleges are minorities, and almost 50 percent are the first generation in their families to pursue higher education.
- More than 50 percent of dependent career-college students come from families with an income of less than $40,000.
- More than 75 percent of the students are employed while they are enrolled in career colleges.

The growth of for-profit colleges was very strong in the decade ending in 2006:

- The total number of associate degrees granted by for-profit colleges grew from 49,969 in the 1995-96

academic year to 106,960 in the 2005-6 academic year, an increase of 114 percent. **For-profit colleges now grant 15 percent of all associate degrees in the country.**

- The total number of bachelor's degrees granted by for-profit colleges grew from 11,648 in the 1995-96 academic year to 59,410 in the 2005-6 academic year, a 410-percent increase. **For-profit colleges now grant 4 percent of all bachelor's degrees awarded in the United States.**

- For-profit colleges awarded 3 percent of all college degrees in 1995-96, but that increased to 7 percent in 2005-6.

The Competitive Advantage

Mr. Miller believes the for-profit colleges' share of all degrees may have already increased since 2006, the year the most recent data covers, from 7 percent to 9 percent. **He thinks it will reach 15 percent by 2020.** He cites several reasons why:

- The for-profit sector is more nimble and picks up on trends in the marketplace more quickly. It is faster to create education programs to fill those needs, and—maybe even more importantly from an efficiency standpoint—it is quicker to end programs that do not have a profitable future.

- For-profit colleges will attract more minority students. "Traditional universities are much more selective socio-demographically," said Mr. Miller. He said white non-Hispanics and Asian students usually choose to go to traditional four-year public and private institutions, but other minority groups that are becoming more numerous are attracted to his institutions, in part because his institutions are not intimidating to newcomers. "We are going to pick up on this Hispanic population, this multi-ethnic population."

- Traditional colleges are "in a world of hurt" because of limited spending capital, said Mr. Miller. At the

same time that public institutions are growing in popularity because of their lower costs, they are having their budgets cut because of decreased tax collections. For-profit colleges, on the contrary, "can bring more capital to the table and expand capacity," he said.

- The demographic peak of high-school students that just passed will not peak for the for-profit colleges until about six years from now, since the typical student at for-profit colleges is in his or her mid-20s.

The biggest challenge for the for-profit colleges, said Mr. Miller, is finding enough qualified instructors and enough clinical time for such degree programs as nursing and physical therapy.

Ways to Think About the Data

Traditional colleges could learn a lot by studying the inroads made into their markets by for-profit colleges. But they also must recognize that for-profit colleges spend much more money marketing themselves. For-profit colleges spend up to a third of their operating budgets on marketing, while traditional colleges might spend a maximum of 4 percent of their budgets on marketing.

For-profit colleges, in almost all cases, offer financial aid solely in the form of loans. As a result, the average graduate of a for-profit college has debt almost twice as high as graduates of any other category of college. While students have responded to the convenience and flexibility of these institutions, the debt load on students is likely to be a hindrance to the growth of these colleges in the long term, unless it is somehow resolved.

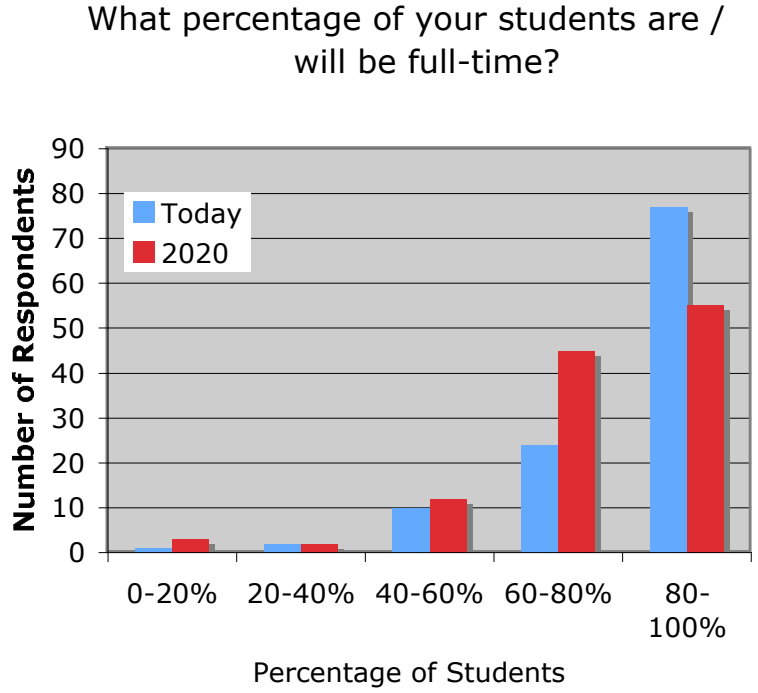
THE COLLEGE OF 2020: STUDENTS
A SURVEY OF ADMISSIONS OFFICERS

To gain further insight into how admissions officers believe their institutions will be changing between now and 2020, Chronicle Research Services in January and February 2009 asked 192 admissions and enrollment officials who are members of its panel of admissions officers to fill out a brief survey. A total of 121 responded to the survey—63 percent of the panel.

The panelists come predominantly from colleges that enroll mostly full-time students from the traditional 18-25 age range. However, the panelists expect that student profile to change rapidly over the next decade.

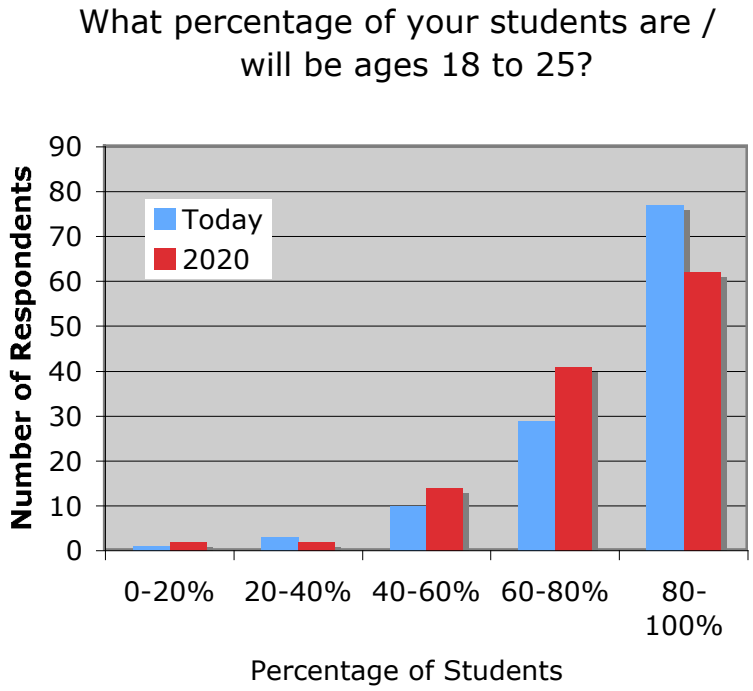
More than two-thirds of the respondents said that at least 80 percent of their current students were full time. Fewer than half of the respondents think that at least 80 percent of students will be full time by 2020.

Table 11: Percentage of Full-Time Students



Similarly, panel members believe the age range of students will be changing. **Almost two-thirds of the panel said that at least 80 percent of their students today are 18 to 25. Only half of the respondents said that at least 80 percent of their students would be in that traditional age range in 2020.**

Table 12: Percentage of Students Ages 18 to 25



More than 85 percent of respondents said that their students took all or almost all of their courses in classrooms only; 97.2 percent of respondents said that their students took 20 percent or less of courses online. No respondents reported that their institutions have students who take all of their courses online only. **In 2020, almost a quarter of respondents think students will take 20 percent to 40 percent of their courses online; 9.5 percent of respondents think the percentage of online courses will be even greater**.

Table 13: Percentage of Classes Held in Classrooms

What percentage of your students are / will be taking classes taught only in classrooms?

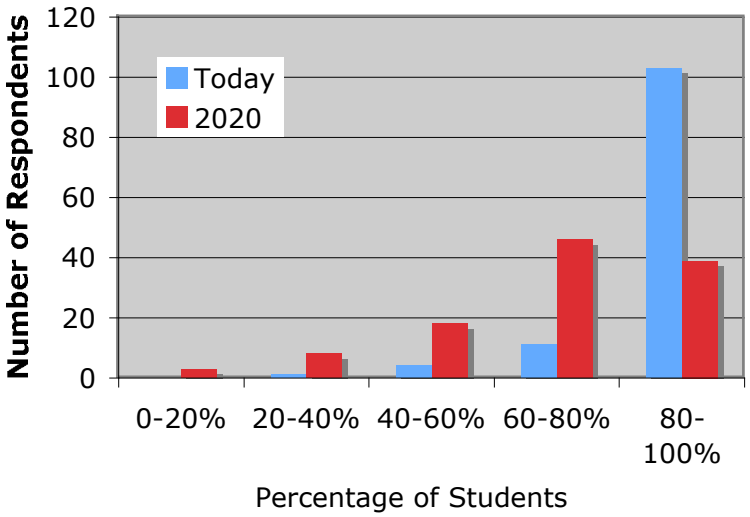
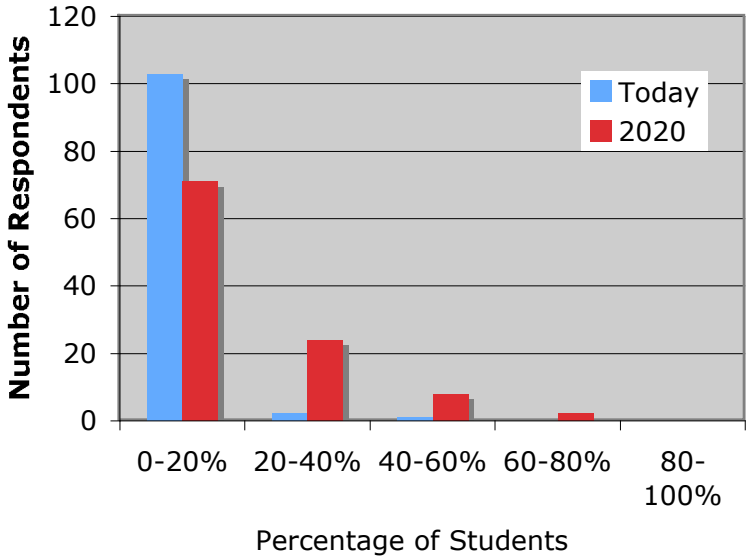


Table 14: Percentage of Students in Online-Only Classes

What percentage of your students are / will be enrolled in online only classes?



Many panel members believe they need to offer many more courses online to appeal to students but are hamstrung by traditional forces on their campuses. "The market is moving away from the traditional mode of disseminating education, but colleges are very slow to understand and adapt to that change," said an admissions director at a private college in the Pacific Northwest.

The fears expressed by colleges, by and large, fell into four basic categories:

- The high cost of college and the availability of financial aid.
- Decreasing numbers of high-school graduates in their regions.
- The lack of online courses or hybrid approaches on their campuses that combine online and classroom instruction.
- Difficulty selling the value of a liberal-arts education when so many students and parents are looking for low-cost alternatives in higher education.

Over and over, respondents worried about what they called the inflexibility of administrators and faculty members.

"Our faculty, supported by the academic dean … have a very traditional approach to teaching. Online course work or even hybrid (combining classroom and online work) is anathema," wrote an admissions director at a Southeastern college.

A respondent from a mid-Atlantic college said institutions were making changes but not going far enough: "**Simply trying to get nontraditional-aged students to take courses without having multiple evening and hybrid courses in place will not increase the nontraditional-aged student population on campus**. We need to set a plan in place, and then take the steps necessary to get there."

Ways to Think About the Data

Colleges need to consider how to sell their value to students. Colleges use the phrase "liberal arts" as shorthand for a variety of benefits—problem solving, critical thinking, integrated learning, writing skills, and so forth. All of those are the essential skills that adults will need in order to be successful later in life. But does "liberal arts" describe that? Or should colleges be thinking of advertising their value as "skill enhancement" or something similar?

THE COLLEGE OF 2020: STUDENTS
ONLINE LEARNING

Nothing is as likely to change the face of higher education over the next decade as the switch to more online learning. While the poll in the previous chapter indicated resistance by some colleges to make more courses available online, research about online education makes it clear that students increasingly want this option in higher education.

In November 2008, a study by the Sloan Consortium, "Staying the Course: Online Education in the United States, 2008," found that **more than 20 percent of all U.S. college students were taking at least one online course in the fall of 2007.**

The enrollment in distance-education courses nearly quadrupled between 2000 and 2007.

Distance-education courses and enrollment grew substantially between 2000 and 2007. The number of institutions offering distance-education courses grew from 2,320 to 2,720. The enrollment in distance-education courses nearly quadrupled, from 3,077,000 to 12,153,000. The following two tables illustrate the growth of online learning in higher education.

Table 15: Distance Education at Degree-Granting Postsecondary Institutions: 2000-1

	Number of institutions offering distance-education courses	Enrollment in distance-education courses	Enrollment in undergraduate courses	Enrollment in graduate/first professional courses
All institutions	2,320	3,077,000	2,350,000	510,000
Type:				
Public 2-year	960	1,472,000	1,435,000	-
Public 4-year	550	945,000	566,000	308,000
Private 4-year	710	589,000	278,000	202,000
Size:				
Less than 3,000	1,160	486,000	368,000	91,000
3,000 to 9,999	770	1,171,000	932,000	197,000
10,000 or more	400	1,420,000	1,049,000	222,000

Source:National Center for Education Statistics, U.S. Department of Education, July 2003
Note: Figures may not add up because the report did not include breakdowns for all types of institutions, such as for-profit colleges.

Table 16: Distance Education at Degree-Granting Postsecondary Institutions: 2006-7

	Number of institutions offering*	Enrollment	Undergraduate	Graduate/First Professional
All institutions	2,720	12,153,000	9,803,000	2,349,900
Type:				
Public 2-year	1,020	4,844,000	4,840,000	3,700
Private nonprofit 2-year	30	11,000	11,000	
Private for-profit 2-year	80	72,000	72,000	
Public 4-year	560	3,502,000	2,611,000	890,900
Private nonprofit 4-year	790	1,854,000	1,124,000	730,400
Private for-profit 4-year	240	1,869,000	1,144,000	724,800
Size:				
Less than 3,000 students	1,390	2,122,000	1,591,000	531,000
3,000 to 9,999 students	870	3,772,000	3,274,000	497,700
10,000 or more students	470	6,259,000	4,938,000	1,321,000

National Center for Education Statistics, U.S. Department of Education, December 2008

*Any college-level credit-granting online, hybrid/blended online, or other distance-education courses

Note: Figures may not add up because of rounding

The most consistent reason that colleges give for offering more courses online is that students are demanding them. As the following table shows, colleges also are offering more online courses for a related reason: to increase student enrollment.

Table 17: Factors Cited as Moderate or Major Factor in Decisions to Offer Classes Online

	Seeking to increase student enrollment	Making more courses available	Making more degree programs available	Making more certificate programs available	Meeting student demand for flexible schedules	Providing access to college	Responding to needs of employers/ business	Maximizing use of existing college facilities	Meeting student demand for reduced seat time
All	82%	86%	55%	34%	92%	89%	62%	63%	47%
Type:									
Public, 2-year	89%	92%	56%	49%	98%	97%	65%	71%	56%
Public, 4-year	78%	84%	64%	38%	89%	85%	62%	56%	39%
Private, nonprofit 4-year	81%	77%	46%	24%	85%	85%	52%	47%	31%
Private, for-profit 4-year	76%	91%	63%	4%	95%	79%	74%	83%	72%
Size:									
Less than 3,000 students	80%	85%	48%	25%	92%	86%	60%	61%	44%
3,000 to 9,999 students	87%	87%	59%	40%	93%	91%	63%	64%	51%
10,000 or more students	82%	86%	67%	51%	92%	93%	66%	64%	46%

Source: "Distance Education at Degree-Granting Postsecondary Instituitions: 2006-2007." National Center for Education Statistics, U.S. Department of Education (December 2008)

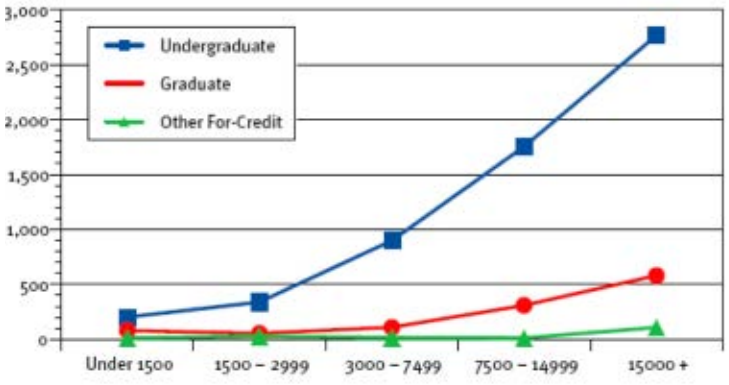
The growth in online enrollment is seen across almost all disciplines.

Of the eight major discipline areas examined by the Sloan Consortium, only engineering was far less represented in online courses than other areas. Public institutions have the highest percentage of courses that are offered online for all disciplines other than engineering. Community colleges offer, by far, the greatest percentage of online courses in psychology, social sciences, and the liberal arts.

The Sloan report shows that the overwhelming majority (more than 80 percent) of online students are undergraduates. Only 14 percent take graduate-level courses online. The rest are enrolled in other for-credit courses.

The average number of online students per institution shows a strong positive correlation to the size of the institution. That is especially true in the undergraduate population.

Table 18: Mean Online Enrollment by Size of Institution, Fall 2007



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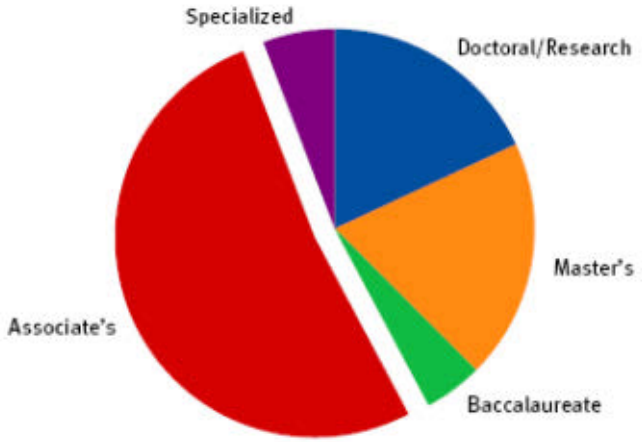
Community colleges have an outsized role in higher education in offering online courses. The colleges collectively teach about 37 percent of higher-education students, but research by the Sloan Consortium shows that more than half of all online students are enrolled by community colleges. The Sloan Consortium says this pattern of associate-level colleges claiming a large share of online

enrollments has been consistent for the six years it has been studying it.

Table 19: Online Enrollments by Carnegie Classification, Fall 2007



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The number of colleges offering courses online continues to grow quickly. One in five institutions with online courses introduced their first offerings in 2007-8, according to the Sloan Consortium report.

And there are many anecdotal signs that the resources being devoted to online learning are accelerating:

> The Minnesota State Colleges and Universities system announced in November 2008 that it planned to offer 25 percent of college credits online by 2015. Only about 9 percent of course credits delivered during the past academic year in that system were through online education. (*The Chronicle,* Wired Campus blog, November 20, 2008)
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> The Louisiana Community and Technical College system announced in November 2008 what is believed to be the first program in the United States to offer comprehensive degree programs by cellphone. The program, called LCTCSOnline was built in collaboration with AT&T and Pearson Custom Solutions, a branch of the publishing and education company. (*The Chronicle,* Wired Campus blog, November 12, 2008)

But those sorts of trends may just be a precursor to a coming wholesale change in the way higher education is delivered.

Enrollment in online courses in high schools is still relatively small (it reached the one million mark in 2007), but it is growing even faster than enrollment in college online courses. According to the International Association for K-12 Online Learning, enrollment grew by 22 times between 2000 and 2007. That's just the start, says a 2008 paper by Clayton M. Christensen, a professor at Harvard Business School, and Michael B. Horn, executive director of education at the Innosight Institute, a think tank. The paper was released by the Hoover Institution at Stanford University. The authors predict that by 2019 half of courses in Grades 9 to 12 will be delivered online. They predict that the technological and economic advantages of shifting learning online will overwhelm the traditional public-school model of face-to-face classroom teaching.

Some states are early adopters of online learning in elementary and secondary schools. At least two dozen of Michigan's 552 districts and 230 charter schools, for example, have applied for the waivers from rules that require students to be in a school building for nearly 1,100 hours each school year. Students also are limited by state law to taking only two online courses outside a school building during a semester. (Lori Higgins, *Detroit Free Press,* January 3, 2009)

The Florida Virtual School, which offers only online courses, enrolled 63,000 students in that state in 2007-8. The school was started in 1997 to serve students in advanced computer classes and students "who were exceptionally self-disciplined," according to its Web site. However, it has grown to offer classes across the curriculum, including in science, mathematics, social sciences, and foreign languages. The Florida Legislature includes the school in its per-pupil funding formula, and the idea is spreading quickly. All 16 states represented by the Southern Regional Education Board now have a virtual public school at some stage of development.

Seeing an opportunity, free enterprise has moved in. K12 Inc., the leader in the elementary-and high-school online education market, is on pace to have annual revenues of $300-million this fiscal year. It has operations in 24 states and the District of Columbia and an enrollment of at least 50,000. It

went public in December 2007 and enjoys a market value of about $475-million. “A lot of education groups are resistant to change,” says its chief executive, Ron J. Packard. “We view ourselves as a service for the public school system and not competition for public schools.” (David K. Randall, *Forbes,* August 11, 2008)

Still, even with the inexorable drive toward increased adaptation of technology into courses, colleges should not be intimidated.

Carol A. Twigg is president and chief executive of the National Center for Academic Transformation, which advocates redesigning college curricula, in part by infusing more use of technology. She hears about colleges experimenting with online tools and Web sites like Twitter and Facebook in teaching, but calls it “fluff.”

“Learning is work,” she says. “I don’t know that applications like that have a place in learning.” She says use of technology need not be trendy, just solidly integrated into the teaching plan. “The Web, it’s infinitely flexible, it’s everywhere,” Ms. Twigg said in an interview with Chronicle Research Services. “I’m not convinced colleges need to adapt much more than that, other than to invest in good strong networks.”

Ways to Think About the Data

The number of public institutions offering distance-education courses is higher than the number of private institutions offering them. Rather than seeking to replicate what public colleges are already doing, it is possible that the private colleges could allow their students to take distance-education courses at the public institutions.

Many small residential colleges that emphasize the value of small classes and face-to-face teaching are in a difficult spot when it comes to online education. Nevertheless, they may need to think about requiring their students to take online courses, and emphasize that online learning is important preparation for the continuing education they may have to take once they enter their careers.

Colleges with online general-education courses might consider making a concerted effort to encourage high-school students to enroll to get a taste of college and start earning credits. It is possible that the courses will make the high-school students comfortable with online learning, and dual enrollment could help encourage students to consider attending the college offering the course when that student is ready to pursue a degree.

THE COLLEGE OF 2020: STUDENTS
INTERNATIONAL ENROLLMENT

Reports have shown a significant increase in international enrollment at American institutions over the past decade. The "Open Doors 2008" report from the Institute of International Education showed that **between 2006 and 2008 international student enrollment rates at higher-education institutions in the United States grew by more than 10 percent.**

But can that rate of increase be expected to continue? The evidence is contradictory.

According to a survey by IDP Australia, an international education consulting company, global demand for international higher education will grow from 2.17 million students in 2005 to 3.72 million in 2025. That would represent growth of 71 percent over 20 years, or compound growth of 2.7 percent per year. There are no predictions on how such growth would affect international student enrollment in the United States, although more students worldwide will be available, and, presumably, many would be interested in the United States if the nation's universities maintain their reputations as the preeminent colleges in the world.

Recently, other countries have become more competitive in luring international students who would have traditionally studied in the United States

The Chronicle of Higher Education reported that at a meeting in February 2009 of the Association of International Education Administrators, **one study estimated that the number of people in the world seeking higher education will double by 2025, to 200 million.** (*The Chronicle,* March 6, 2009). A number of universities with representatives at the conference reported that applications from international students were up sharply for the fall of 2009, although no data on the overall increases are available yet.

A number of factors make it difficult to determine what international student enrollment will look like in 2020. Recently, other countries have become more competitive in luring international students who would have traditionally studied in the United States. When the British Council recently recalculated some of its statistics, it found that Britain is now almost on a par with the United States as a destination for international students. The world economic downturn is making it difficult for international students to pay the high

price tag for a degree in the United States.

Students from the top five nations of origin—India, China, South Korea, Japan, and Canada—made up 49 percent of all international students in the United States in 2007-8: a total of 308,000. Of those, 97,452, or 32 percent, were attending American universities as undergraduates, and 165,582, or 54 percent, were graduate students.

The following tables are from "Open Doors 2008":

Table 20: New International Student Enrollment in the United States

Year	Total	% Change
2004-5	131,946	-
2005-6	142,923	8.3%
2006-7	157,178	10.0%
2007-8	173,121	10.1%

Source: Institute of International Education

Table 21: Total International Student Enrollment in the United States

Year	Total international	% Change	Total U.S. higher-education enrollment*	% International
2004-5	565,039	-	17,272,000	3.3%
2005-6	564,766	-0.05%	17,487,000	3.2%
2006-7	582,984	3.2%	17,672,000	3.3%
2007-8	623,805	7.0%	17,958,000	3.5%

Source: Institute of International Education
*Data from National Center for Education Statistics, U.S. Department of Education

Table 22: International Student Enrollment in the United States, by Academic Level

Year	Undergrad	% Change	Graduate	% Change	Non-degree*	% Change
2004-5	239,212		264,410		28,418	
2005-6	236,342	-1.2%	259,717	-1.8%	30,611	7.7%
2006-7	238,050	0.7%	264,288	1.8%	38,986	27.4%
2007-8	243,360	2.2%	276,842	4.8%	46,837	20.1%

*Includes non-degree and Intensive English Program; excludes Optional Practical Training (OPT)
Source: Institute of International Education

Table 23: Top-Ranking Places of Origin, 2007-8, for International Students in the U.S.

Rank	Country	# Students in U.S.	Undergraduate	Graduate
1	India	94,563	14.4%	72.0%
2	China	81,127	20.3%	65.4%
3	South Korea	69,124	47.6%	35.7%
4	Japan	33,974	61.3%	20.2%
5	Canada	29,051	46.9%	44.9%
6	Taiwan	29,001	26.0%	55.4%
7	Mexico	14,837	58.8%	30.6%
8	Turkey	12,030	30.6%	54.8%
9	Saudi Arabia	9,873	58.5%	23.4%
10	Thailand	9,004	28.4%	56.0%

Source: Institute of International Education

The mixed economic status of the top three suppliers of international students to the United States illustrates just how volatile the picture is for international applications from those countries.

In India, where students are more dependent on getting loans to pay for overseas educations, lending standards have tightened and loans are increasingly hard to come by. (*The Chronicle,* February 27, 2009).

The declining value of the South Korean currency, the won, has reportedly caused more South Korean students than usual to stay at home. The number of applications from South Korean students for enrollment in American universities dropped by 7 percent this year compared with last year, reported the Council of Graduate Schools, in April (*The Chronicle,* April 17, 2009).

Applications from Chinese students, meanwhile, are burgeoning. The number of Chinese students applying as undergraduates to American universities, which had held steady for years at about 9,000, jumped to 16,000 in 2007 (*The Washington Post,* May 1, 2009). Chinese universities are overcrowded, and the unemployment rate for recent college graduates is hovering around 12 percent, so many middle- and upper-class families are looking overseas. The one-child policy and high family savings rates have made American higher education more attainable. So has the steady buying power of the Chinese currency, the yuan, which has appreciated 21 percent against the dollar since July 2005, when the Chinese

government began to unpeg the values of the currencies from each other (*The Chronicle,* February 18, 2009).

That kind of economic uncertainty and currency fluctuation is cyclical and hard to predict, so current conditions may have little resonance in 2020. Several other factors are in play. As a previous report from Chronicle Research Services ("Financial Uncertainty and the Admissions Class of Fall 2008," December 2008) pointed out, Canada and Britain, the top two competitors to the United States for international students, have better-coordinated recruitment efforts. Also, nations like China and India are attempting to create first-class higher-education institutions on their home soil. If they are successful, the number of students going overseas to study will decline over time, though it is unclear how soon that will begin to happen.

Some struggling colleges are looking to attract more international students as a relatively simple way to raise revenue. Ironically, surveys of international students show that the international student has the same tastes as the American student: The wealthier and better-educated international students attend the more elite and selective private and public universities. Those international students who are less affluent tend to enroll in less-endowed American colleges and require more financial aid in order to attend. So the cause is lost.

Ways to Think About the Data

Colleges would be wise to emphasize and exploit the traditional feeder areas they have for international students, rather than try to expand into new areas. The resources required for marketing in new international markets are simply too great for most colleges to be able to afford.

THE COLLEGE OF 2020: STUDENTS
ADULT LEARNERS

As noted earlier, **the adult student market will be the fastest-growing one in higher education for the foreseeable future.** The growing trend of adult students has been masked in part by the population growth in the traditional college-age set.

Data from the U.S. Department of Education's National Center for Education Statistics shows a growth rate of more than 20 percent between 1990 and 2007 in the total number of working adults who participated in adult-education courses. In just the nine years between 2007 and 2016, the number of adult learners is projected to increase another 18 percent:

Table 24: Total Fall Enrollment, by Age, Selected Years, 1990 to 2016

in thousands							
Age	1990	1995	2000	2005	2007[1]	2010[1]	2016[1]
25 to 29 years old	1,982	2,120	1,960	2,384	2,533	2,688	3,168
30 to 34 years old	1,322	1,236	1,265	1,354	1,337	1,443	1,741
35 years old and over	2,484	2,747	2,749	3,090	3,086	3,034	3,319

Source: Digest of Education Statistics, 2007 (NCES 2008-022)
U.S. Department of Education, National Center for Education Statistics
1. Projected

Over all, the fastest-growing demographic group in the next decade will be those ages 25 to 44.

Table 25: Projection for U.S. Population by Age, 2010-20

in thousands				
	2010	2015	2020	Change
18-24 years old	30,713	30,885	30,817	0.3 %
25-44 years old	83,095	85,801	89,724	8.0 %
45-64 years old	80,980	83,911	84,356	4.2 %

Source: U.S. Census Bureau, National Population Projections, 2008

Tim Panfil, managing director of the School for Advanced Learning at Elmhurst College, has extensive experience advising adult students, and he has seen huge growth in adult enrollment over the past 15 years. "They have the greatest potential for growth, and they are willing to pay a high price

tag for convenience and support." he said in an interview with Chronicle Research Services, predicting adult student enrollment will continue to grow and adult students will increasingly become the focus of many colleges nationwide.

About 70 percent of all adult students are pursuing a degree, but only about 30 percent of adult students are enrolled full time.

According to the "National Adult Student Priorities Report," a 2008 study on adult students and learning patterns conducted by the Noel-Levitz consulting firm, about 70 percent of all adult students are pursuing a degree, but only about 30 percent of adult students are enrolled full time. Half of all adult students are enrolled at four-year institutions and the other half are at two-year institutions. Of those adult students who are attending community college, 75 percent do not have any type of college degree.

For adult students, convenience and support are critical for success. Many adult students have families and go to school at night or on the weekends to keep their jobs. Many of them are choosing online programs and for-profit institutions because they are flexible.

"Convenience does not equate to easiness," Mr. Panfil cautions, "and **a lot of adult students don't understand the level of discipline it takes to complete a program entirely online.**" Elmhurst College is seeing more and more adult students who had previously enrolled in online degree or certification programs at for-profit colleges but could not complete them. "Online-only courses are more difficult than in-person," he said. "A lot of adult students don't realize how much time they take."

A 2007 Lumina Foundation report, "Returning to Learning: Adults' Success in College Is Key to America's Future," advises colleges to give adult students the option of taking courses in-person, entirely online, or by a hybrid method (both online and in-person). It also advises taking the following steps to appeal to adult students:

Develop career-related certificate programs that can be counted toward a degree. Many adult students will spread their academic work over many years. As they earn credits, they can qualify for certificates of completion. Certificates recognize their accomplishments and keep them motivated to finish their degrees.

Provide part-time degree programs and create year-round, accelerated, and convenient programming. Adult students have very different schedules, and they will need the flexibility of taking courses at any time of the year, at night, in the mornings, or online. They also should have the option of completing an accelerated course in a weekend, over a few weeks, or in a significantly shorter time frame than is usually offered.

Create "maps" to degrees. It is important for adult students to have a clear understanding of how their time and courses fit into a degree program. This allows students to stay motivated and visualize the progress they have made toward a degree.

Offer continuous admission and class registration. A continuous admissions cycle allows adult students to start a degree program and register for courses at any time of the year. Once they decide to continue their education, many adult students will look for the most convenient program and, often, one that they can start right away.

Ways to Think About the Data

Colleges complain that a hurdle to creating study programs exclusively for adult students is the accreditation system, which insists that the standards for a course offered to undergraduates be the same as one offered to adult students. This is a battle colleges will need to wage with their accrediting bodies.

THE COLLEGE OF 2020: STUDENTS
CONCLUSION

Colleges have three basic business models for attracting and keeping students. Two will continue to work in the next decade, and one almost certainly will not.

The business model for the most elite colleges with sterling brand names, and for most flagship public universities, will continue to work for the foreseeable future. At those institutions, the demand for a brand-name degree and the traditional residential model will remain higher than the supply. They have weaknesses that other colleges can exploit, such as exorbitant cost and professors who spend little time with students. But, over all, the demand for their degrees will surely remain strong for the next decade.

The model for for-profit colleges and community colleges is also strong. They cater to older students who have no time for a traditional college "experience" but want and need courses that are available at times and in formats that fit their schedules. Again, there are weaknesses: Some community colleges are marked by large classes and an inability to provide enough courses in some subjects to satisfy their students. The for-profit colleges are costly, and students pile up much greater debt than students at other colleges.

And then there are the many colleges in the middle. They don't have well-known brand names and wide recognition that draw crowds. They have been able to maintain a steady supply of students because the population of 18-to-24-year-olds has been growing for decades. But over the next decade, that population overall will not increase. Many colleges that have focused on a residential, four-year model will find that they need to attract more adult students, more part-time students, and more students who will want all or many of their courses online.

Many of these colleges are historically and constitutionally unequipped for such a major shift. For 30 years, the price of college has gone up inexorably, and students and their families have willingly paid the price, seeing a college degree as a requirement to have a chance at a successful career and a good income. But inflation-adjusted average incomes have been stagnant for a decade. As average student debt has piled up,

students have wondered if the price is worth it. And they have begun to look for alternatives based, in part, on lower prices and greater convenience.

As average student debt has piled up, students have wondered if the price is worth it.

For too long, these colleges have stuck with the same business model. They have hesitated to take courses online, to cater to adult and part-time students, and to offer courses at any time other than on weekdays between 9 and 5. When it is common for private colleges to give away their product at about a 40-percent discount, it might be time to question whether the business model can continue.

Some regional public universities have started to figure out some of the answers. They offer what is a still a relatively inexpensive education in more flexible ways: off campus, online, part time. They generally are not research institutions, so they can offer students more access to professors. However, many are stuck with infrastructures that a growing number of students aren't interested in, most notably dormitories and academic programs with tenured professors that were built up in earlier years but do not attract enough students to justify continuing.

Small, private liberal-arts colleges have even more concerns, since they have no state support to fall back on. They emphasize a liberal-arts learning model that has been increasingly seen as elitist and out of touch with the job market. They have costs that make them unaffordable to middle-class families. With each scholarship they hand out, they are endangering their ability to balance the books.

Every college, meanwhile, must adapt to a new breed of student. The students of 2020 will demand an education on their terms and will be seeking a technology-based customized approach. **The bottom line is they will want it all: a plethora of learning options that they can mix and match to play to their strengths.** They will be looking for educational opportunities that take into consideration the fact that they may want remedial education in some areas, college credit for work and life experiences, and practical courses that will clearly delineate the skills and practices that will enhance a student's chance at entering a chosen career.

The students of 2020 will demand an education on their terms.

Colleges will need to look for new ways to attract audiences they may not have reached out to before: high-school dropouts, first-generation students, and adults who need retraining in their present career, for an alternate career, or for a first career. The competition is stiff. Many colleges, particularly in the for-profit market, have already recognized this need and have a huge head start. To compete for students, many colleges will need to re-imagine themselves as more convenient and more open—and market in a way that makes them appear more likely to give a student a career boost than the college down the street.

Good teaching will always be at the core of a good university, but for most colleges, higher education will become a more retail-based industry than it ever has been. The students of the future will demand it. Many colleges have a long way to go before they can fulfill that demand.

THE COLLEGE OF 2020: STUDENTS
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