

DEMOGRAPHIC AND ATTITUDINAL TRENDS: THE INCREASING DIVERSITY OF TODAY'S AND TOMORROW'S LEARNER

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The postwar (World War II) baby boom has had a pronounced effect on national demographics, influencing the expansion of educational facilities and straining the ability of labor markets to absorb large numbers of new entrants to the workforce. From 1960 to 1980, the average age of the labor force decreased from 40.5 years to 34.7 years (London and Greller, 1991). With smaller population cohorts following the baby boom period, the average age of workers is now currently increasing and is expected to reach approximately 39 years by the year 2000. Canada's population projections indicate a similar trend with median age of the entire country currently at 33.8 years and expected to reach 50 by the year 2036 (McKie, 1993). College enrollments in the United States expanded along a similar path, abetted by the Vietnam War which forced many young males into higher education during the 1960's. However, the expected decline in enrollments, long anticipated for the 1980's, failed to materialize as increasing numbers of women and minorities pursued degrees. Past demographic patterns and estimated projections provide insights into what can be expected with regards to future higher education enrollments and labor market participation.

Baby boomers and the generation that followed them have brought new attitudes and values, some similar and some different, to college campuses. If sheer numbers did not influence educational institutions and the workplace, their learning styles, their ambitions and outlook on society, and a new type of consumerism certainly have. This paper will briefly review demographic shifts, as well as examine changes in student attitudes.

Demographic Overview

Recent population projections into the early part of the next century reveal a population that is taking on new characteristics and living in new places (Campbell, 1994; Day, 1993). Estimates find:

- The U.S. population will grow from approximately 258 million people to slightly more than 300 million from 1993 to 2010, or 16.5%.

Feature

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- The top states in population will remain California, New York, Florida, Pennsylvania, New Jersey, Georgia, Illinois, Ohio and Michigan; yet the fastest growing states will all be in the West with the exception of Texas: Nevada, Idaho, Alaska, Washington, Utah, Colorado, Arizona, New Mexico, Oregon and Hawaii. Over the next two decades the population will continue its shift toward the south and strongly west.

Population Distribution by Region of the United States (%)

<u>Region</u>	<u>Year: 1993</u>	<u>Year: 2010</u>
Northeast	19.9	17.0
Midwest	23.7	21.2
South	34.6	36.0
West	21.8	25.8

- The population will continue to age, moving from 32.8 years in 1990 to 35.5 in 2000 and peaking at 39.1 in year 2035.
- By the year 2011 the first baby boomers will reach age 65 and their percentage of the population will drop from 30% today to 25%.
- While the number of young people under age 18 will increase by six million through year 2000, they will only make up 23% of the population.
- College students and new entrants in the labor force are traditionally drawn from the 18-21 age group. This group peaked in 1980 at 17.4 million and has declined over the intervening fifteen years to 14.0 million. The group will begin to grow reaching an estimated 18 million by 2010.
- The 25-44 age group will remain relatively constant in size though the 25-34 cohort will actually decrease in size, offset by growth in the 35-44 age group.
- The fastest growing group will be ages 45-54 which will represent 40% of the expected growth over the next two decades.
- The actual numbers of the white population will grow by 14.9 million by 2010 but will shrink by 8% in terms of total population.
- Afro-American population will grow slightly faster than the white population over this period; however, Asian-Pacific Islanders' numbers will expand by two times over the next two decades.
- Hispanic groups will be the biggest factor in population growth, representing nearly 40% of the growth by year 2010.
- Hispanics will be the youngest population with one-half under 26 years of age while the white population will remain the oldest.

Table 1
Estimate Population Growth and Composition by Selected Age Groups: 1990 to 2010 (in thousands)^a

Year	Total Population	Age 18-24	%	Age 25-34	%	Age 35-44	%	Age 45-64	%
1990	249,391	26,829	10.8	43,136	17.3	37,765	15.1	46,277	18.6
1995	263,434	25,465	9.7	41,670	15.8	42,150	16.0	51,465	19.5
2000	276,241	25,911	9.4	38,237	13.8	45,123	16.5	59,860	21.7
2005	288,286	28,238	9.8	36,792	12.8	43,075	15.2	70,089	24.3
2010	300,431	30,220	10.1	38,179	12.2	39,659	13.4	78,651	26.2

^aSource: Day, J.C. Population Projections of the United States by Age, Sex, Race and Hispanic Origin: 1993 to 2050. Current Population Reports, p. 25-1104. Bureau of the Census. Washington, D.C.: U.S. Department of Commerce.

The Bureau of Labor Statistics, U.S. Department of Labor, released new labor market projections covering the period 1994 to 2005 (Bureau of Labor Statistics, 1995a and 1995b). Using moderate growth projections, the labor force is expected to grow by 16 million people from 131 million (1994) to 147 million (2005). This growth of 12% is lower than the 16% experienced during the previous eleven years, 1982-93. Another 23 million people will enter the workforce replacing those leaving because of retirement, death, health, or other reasons.

The biggest changes will occur in the composition of the workforce and the types of positions that will be available. White, non-Hispanics, will experience a slight decline in its share of the labor force that is currently 77%, as approximately 66% of new workers will be from this group. More Hispanics will enter the labor force during the next decade, equaling Afro-Americans in total size by 2005.

Women's share of the labor force will increase from approximately 46% to an estimated 48% by 2005. The labor force participation rates for women are estimated to increase slowly, particularly among young women who are more likely to be found in school. Men's participation rates are expected to continue to decline. As expected, the labor force will age due to the baby boomers getting older and a decline in the 25 to 34 year old cohort.

Employment opportunities are projected to increase between 1994-2005 by 14% that is only half the 24% growth rate during 1983-94. Nearly all of this employment will occur in the service-producing sector; manufacturing jobs will continue to disappear with some 1.3 million jobs estimated to be lost. Manufacturing will account for one in every eight jobs

with the balance being picked-up by health services, business services, and social services. Half of all jobs added to economy will come from these latter sectors.

Table 2
Population Projections Based on Race and Ethnic Origin: 1990-2010^b

Year	% Distribution U.S. Population	White	Afro-American	Native American	Asian Pacific Islander	Hispanic
1990	75.7	11.8	0.7	2.8	9.0	
1995	73.6	12.0	0.7	3.5	10.2	
2000	71.6	12.2	0.7	4.1	11.3	
2005	69.7	12.4	0.8	4.8	12.4	
2010	67.7	12.6	0.8	5.4	13.5	

^bSource: Day, J.C. 1993. Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1993-2050. Current Population Reports p.25-1104. Bureau of the Census. Washington, D.C.: U.S. Department of Commerce.

Of the 17.7 million jobs projected to be added to the economy, five million will be professional occupations and 4.6 million will be service workers. These jobs are at opposite ends of the spectrum in terms of educational requirements and earning potential. Other areas expected to grow faster than average include technicians and related support positions, marketing and sales, and administrative and selected managerial occupations. Of the ten fastest growing occupations, five are health related. For the sake of argument, approximately 400,000 to 500,000 of the new jobs added to the economy each year will require a college education. This would mean that approximately 700,000 to 800,000 bachelor's graduates annually will have to find employment in positions being vacated by others with similar educational credentials. The supply of college trained workers may well exceed their demand.

Educational and training requirements vary for these new jobs. More attention will be given to educational preparation. Occupations that require an associate degree or higher are expected to grow faster than the 14% average of all occupations. Beck's (1995) analysis of employment

opportunities further emphasizes the educational demands being placed on new jobs. Besides looking at employment gains and losses through replacement and creation, Beck adds a knowledge ratio that accounts for the percentage of employees in an industry that are professionals, technicians, or "knowledge workers." The top employer, the temporary employment agency, is a moderate knowledge industry while the second leader in job growth, restaurants and bars, is a low knowledge industry. After that the sectors creating quality jobs require more knowledge workers: health related (especially home health care), motion picture production, community-based care services, child day care, computer software, management consulting and public relations, television, and education. Not all knowledge industries are expected to grow as defense related companies, financial institutions, and computer hardware companies will continue to decrease job opportunities.

Historic Educational Patterns

Since the 1940's, education levels within the United States have increased steadily. The percentage of the population over 25 with less than five years of education dropped from approximately 14% to slightly more than 2% in 1990; correspondingly, the number completing high school rose from about a quarter of the population to more than 75% with a similar increase in the number receiving a four-year college degree — from 5% in 1940 to 21% in 1990 (Table 3). These changes are reflected in the median education level of the population that has risen from 8.6 years in 1940 to 12.7 years in 1990. It should be noted, however, that the level has increased slowly, by only one-half year, since 1970: 12.2 to 12.7.

Similar changes, yet more pronounced, have occurred within the 25-29 age cohort. High school completion rates for this group rose from 38% in 1940 to 85% in 1980, inching up to nearly 86% by 1990. The number completing four years of college increased nearly four times since 1940 (6%), reaching 23% by 1990. The decade with the largest increase occurred in the 1970's — nearly 6%. However, the median education level has only inched upward since 1950. From a level of 12.1 years, the median had reached 12.9 years by 1990 — an increase of only one year in more than four decades with very little movement in the last two decades (Table 3).

To achieve this attainment in college education levels, more high school graduates had to attend college and presumably complete a degree. From Table 4 historic enrollment patterns in college can be traced and comparisons made between sex and race. In 1960 the number of high school graduates was 1,679,000; this was just before the influx of baby boomers into the high schools. By 1965 the number had increased by a million with

graduates numbering 2,659,000. This number increased steadily, peaking in the mid 1970's, before beginning an anticipated decline, which finally ended in 1991 when 2,276,000 students graduated from high school.

Table 3
**Number of Years of School Completed in the United States:
25 and Over and 25-29 Cohorts¹**

Age of Cohort 25 and over	Less than 5 years	4 years of high school or more	4 years of college	Median
1940	13.7	24.5	4.6	8.6
1950	11.1	34.3	6.2	9.3
1960	8.3	41.1	7.7	10.5
1970	5.3	55.2	11.0	12.2
1980	3.4	68.6	17.0	12.5
1990	2.4	77.6	21.3	12.7
25-29				
1940	5.9	38.1	5.9	10.3
1950	4.6	52.8	7.7	12.1
1960	2.8	60.7	11.0	12.3
1970	1.1	75.4	16.4	12.6
1980	0.8	85.4	22.5	12.9
1990	1.2	85.7	23.2	12.9

¹Source: Develeyn, Gerald (ed.) 1991. Condition of Education. Washington, D.C.: US Department of Education; Snyder, T.M. 1993. Digest of Educational Statistics. National Center of Educational Statistics. Washington, D.C.: US Department of Education.

College enrollment immediately after high school hovered around 50% for much of the 1960's and 1970's. The vast majority of those engaged in higher education were men; many enrolled in college during the late 1960's and early 1970's to earn deferments from the draft for the Vietnam War. When college deferments were removed, men participating in college declined from a high of around 60% in the late 1960's to approximately 47% in 1980. However, the percentage of students enrolling remained steady due to the dramatic increase in college participation by women. Only 38% of the women graduating in 1960 enrolled in college. Today, nearly 64% of women graduating from high school enroll. This is nearly 4% higher than the rate of men that is slightly below 60%.

College enrollment patterns have historically been sustained by white students. Since 1965 more than 50% of all white students graduating from

Table 4
College Enrollment Patterns by Sex and Race: 1960-1992

Year	High School Graduates (thousands)	Enrolling All-Immediate %	Men %	Women %	White %	Black %	Hispanic %
1960	1,679	45.1	54.0	37.9	45.8	—	—
1965	2,659	50.9	57.3	45.3	51.7	—	—
1970	2,757	51.8	55.2	48.5	52.0	—	—
1975	3,186	50.7	52.6	49.0	51.2	—	—
1980	3,089	49.3	46.7	51.8	49.9	41.8	52.7
1985	2,666	57.7	58.6	56.9	59.4	42.3	51.1
1987	2,647	56.8	58.4	55.3	56.6	51.9	33.5
1989	2,454	59.6	57.6	61.6	60.4	52.8	55.4
1990	2,355	59.9	57.8	62.0	61.5	46.3	47.3
1991	2,276	62.4	57.6	67.1	64.6	45.6	57.1
1992	2,398	61.7	59.6	63.8	63.4	47.9	54.8

Source: Devlen, Gerald (ed.), 1991. Condition of Education. Washington, D.C.: US Department of Education; Snyder, T.N. 1993. Digest of Educational Statistics. National Center of Educational Statistics. Washington, D.C.: US Department of Education.

high school have enrolled in college. From figures only available since 1980, black participation in college has fluctuated between 42% and 50% while Hispanic graduates were slightly higher at 47% to 55%. These latter figures capture participation from a much smaller pool of candidates, as the high school completion rate is much lower for blacks and Hispanics than whites. According to U.S. Bureau of Census figures, whites between the ages of 19 to 20 have completed high school at a rate of 85% or better since 1975 (87% in 1989). Blacks in the same group have improved from 66% in 1974 to 75% in 1989; correspondingly, Hispanic rates have ranged in the upper 50s for much of the past decade, being 59% in 1989. Based on these figures, college participation rates, immediately following high school graduation, are estimated to be 55%, 36% and 32% of all white, black and Hispanic graduates respectively.

First-year students' engagement in college can be depicted as full-time. Approximately 70% of all students have been enrolled full-time since 1970. Men have tended to enroll full-time at higher rates than women though historically this gap has not been large. The most dramatic change in enrollment patterns has been the type of institution that high school graduates attend. In 1960 approximately 77% of high school graduates attended four-year colleges. By 1970 students were shifting their enrollment to two-year colleges: 56% in four-year schools and 44% in two-year schools. In 1991, the enrollment was nearly evenly split with slightly more students in two-year colleges (Table 5).

Though enrollments in college have remained high at the freshman level, what about the completion rate? Are students finishing their four year degree programs? The percentage of high school graduates between the ages of 25-29 who finished college has settled at about 25% of the age cohort (Table 6). In 1965, approximately 18% of this age cohort had completed a degree. This rate jumped by nearly 8% over the next decade to 26% and has changed very little since. Persistence in college has improved over the last decade; yet only between 50% - 60% of entering students graduate with a degree. The U.S. Department of Education (Snyder, 1993; Devlen, 1991) reported first year attrition at between 16% and 20% with a similar rate after the second year. Thus after two years of college 32% to 40% of the students who enrolled as freshmen have left. The odds improved once a student entered the junior year after which 11% failed to return after the third year. If a 60% completion rate is assumed, approximately 18% of a high school graduating class obtains a four-year college degree. (For each 100 high school students, 13 fail to graduate; of the 87 graduates, 55 will elect to go to college, 27 to a four-year school and 28 to a two-year school; 18 of those who entered a four year institution will finish within six years.) This estimate corresponds closely to the figure obtained in the "High School and Beyond" study (Chronicle of Higher Education, 1994) which tracked high school graduates from the class of 1980 through 1986, revealing that 18.2% (17.6% men and 18.8% women) completed a bachelor's degree within six years.

Although more high school students are being funneled into a path that leads to college, their success in college has not kept pace. In other words, completion rates have not followed enrollment rates. For one group, there has been remarkable improvement. Women have seen dramatic increases in the number of college degrees conferred. Between 1971 and 1989, women have experienced better than 100% increases in all types of degrees; most of these efforts have come between 1980 and 1989. For example, in two decades the number of associate degrees conferred to women rose 231% compared to 56% for men; at the bachelor's level women earned 73% more degrees while men only increased 1%. Where women have enjoyed significant increases was in the professional degrees, raising from only 6% of the degrees in 1971 to 36% in 1989. This represented an increase of well over 900% since 1971 (Table 7).

Table 5
Type of Institution Enrolled, Enrollment Status and Enrollment Status by Sex: 1960-1992 (%)¹

Year	Institutional Type 4 Year %	Institutional Type 2 Year %	Enrollment Status Full-Time %	Enrollment Status Part-Time %	Freshman Men Full-Time %	Freshman Women Full-Time %
1960	77	23	—	—	—	—
1965	72	28	—	—	—	—
1970	56	44	77	23	78	76
1975	46	54	70	30	71	69
1980	46	54	68	32	71	65
1985	49	51	70	30	72	68
1987	52	48	72	28	74	70
1989	50	50	71	29	72	69
1990	50	50	72	28	74	70
1991	49	51	73	27	75	71
1992	—	—	—	—	—	—

¹Source: Devlen, Gerald (ed.). 1991. Condition of Education. Washington, D.C.: U.S. Department of Education; Snyder, T. N. 1993. Digest of Educational Statistics. National Center of Educational Statistics. Washington, D.C.: U.S. Department of Education.

Table 6
**High School Graduates Age 25-29 that Finished College (4 Years)
By Sex and Race: 1965-1990 (%)¹**

Year	All	Male	Female	White	Black	Hispanic
1965	17.7	22.1	13.5	17.9	13.9	—
1970	21.7	26.1	17.4	22.2	13.1	—
1975	26.3	29.8	22.9	27.0	15.0	16.8
1980	26.3	28.1	24.5	27.3	15.1	13.2
1985	25.7	26.9	24.6	26.7	14.3	18.1
1987	25.6	26.1	25.2	26.7	13.6	14.7
1989	27.5	28.5	26.5	28.5	15.4	16.4
1990	27.1	28.0	26.2	28.1	16.4	14.4

¹Source: Devlen, Gerald (ed.). 1991. Condition of Education. Washington, D.C.: U.S. Department of Education; Snyder, T. N. 1993. Digest of Educational Statistics. National Center of Educational Statistics. Washington, D.C.: U.S. Department of Education.

Table 7
**Degrees Conferred, by Degree Level and Sex:
Selected Academic Years: 1971-1989¹**

Degree Level	Degrees Earned by Women			Percent Change in Number of Degrees Conferred Since 1971	
	1971	1980	1989	1980	1989
Associate	42.8	54.2	57.4	27.2	100.7
Bachelor	43.4	49.0	52.5	-0.4	25.2
Master	40.1	49.4	51.9	9.1	59.5
Doctor	14.3	29.7	36.5	-16.7	111.3
1st Professional	6.3	24.8	36.3	48.3	625.0

¹Source: The Chronicle of Higher Education. 1994. The Almanac of Higher Education. Chicago: University of Chicago Press.

Education Projections

With many of the "best jobs" in the new economy requiring higher competency levels for basic skills and cognitive abilities, more people are expected to attend college, seeking the credentials to be competitive. Projections to the year 2005 by the National Center for Education Statistics (1995) underscore this intention but with some significant shifts from the previous decade. Overall, higher education is expected to increase by approximately 1% per year between 1994 and 2005; growth will slow to one-third the rate experienced during 1987-1993 (Table 8). These projections place growth at the same levels as the early 1980's. Growth will be similar for public and private and four-year and two-year institutions. Undergraduate growth will be stronger than graduate and professional estimates. In fact, by the beginning of the century, graduate education enrollments may actually decrease.

The biggest changes will occur in the mix of students that will be matriculating to campuses. The growth in women enrolling will slow to an estimated one-half percent per year over the next twelve years for an aggregate growth of 6%. This slow down is natural as the pool of potential female candidates has shrunk: by 2005, 70% of graduating high school women will enroll in college. Men's enrollments will increase at approximately 1% per year, or 12% by year 2005. This rate of increase will also bring men to a 70% enrollment rate. Overall undergraduate enrollment is expected to increase 1.3 million or 9% (NCES, 1995). The age profile will also shift as the smaller age cohort from 25 to 34 moves into the workforce. Educational institutions will find a bipolar distribution with enrollments in the traditional college-age population of 18-24 increasing, reflecting higher birth rates, and at the older end, 35-44, whose participation will increase through the early years of the

decade before tapering off. These two groups are expected to offset losses by the middle cohort. The boomer cohort (35-44), although a highly educated group, will impact educational institutions because so many did not go or complete college. Currently this group is faced with the challenge of upgrading competencies/skills that are being demanded in the workplace.

NCES projections are based on traditional assumptions, especially that people enroll in college to obtain a degree. Traditional assumptions fail to capture some of the new dynamics of the workplace. First, workers will be seeking skill enhancement by learning new sets of skills or competencies; not necessarily a degree. They will seek educational institutions that allow learners to freely enroll and exit programs and to select from course clusters freely (two to three courses) on a particular topic.

Table 8
Average Annual Rate of Growth in College Enrollment (In Percent)
(Middle Alternative Projections)^a

	1980-1987	1987-1993	Projected	
			1993-1999	1999-2005
Total	0.8	2.4	0.7	0.8
Men	0.1	1.9	0.5	1.0
Women	1.3	2.9	0.8	0.5
Full-time	0.3	2.2	0.5	1.3
Part-time	1.5	2.8	0.9	0.1
Public	0.8	2.5	0.7	0.7
Private	0.8	23.3	0.5	0.9
4-year	0.8	2.1	0.5	0.9
2-year	0.8	3.0	0.8	0.6
Undergraduate	0.8	2.3	0.7	0.9
Graduate	1.1	3.4	0.4	-0.1
1st Professional	-0.5	2.0	-0.4	0.2
Full-time Equivalent	0.7	2.3	0.6	1.0

^aSource: National Center for Educational Statistics, 1995, Projections of Education Statistics to 2005, Office of Educational Research and Improvement, Washington, D.C.: U.S. Department of Education. (Most recent update as found on Gopher file - 10/24/95). Outline for the Paper on demographic changes: impact on education.

Second, adult learners want to be able to work and learn at the same time and in the same place. The rapid advance of distance learning attests to demands of learners who do not have access to a college campus. Parsley (1991) challenges universities to confront the current changes in labor

markets by "be(ing) flexible and offer(ing) the adult worker the flexibility to pursue degrees without having to relocate to the site of the university or quit their employment (p.51)."

An excellent example of this approach is being initiated by the University of Victoria that has an arrangement to deliver a master's degree to first nation (native) learners in remote northern provinces through advanced technology. These learners are staying on their jobs full-time and the curriculum is built around their work. Another example finds adults at learning centers operated by the Apollo Group in conjunction with the University of Phoenix. Courses are taught at night with employed professionals as instructors. Apollo Group expects to expand its centers into the Midwest and South and develop education programs to meet the needs of specific corporations. Many of the courses will be taught on-line (Schonfeld, 1995).

While the traditional age college cohort is expected to grow, projections fail to describe who would comprise this group. Conspicuously absent from NCES estimates is a discussion on the racial make up of the college population. Graduation rates of multiracial students have increased through better recruitment and retention efforts. Demographic information indicates that the school age population is increasingly comprised of people of color; the potential for increased enrollment demands that higher education prepare for the differences in cultures. Yet, commentators have been critical, amid many efforts, that higher education's passivity and resistance toward minorities make it difficult for minorities to be successful in organizations that are not inclusive or responsive to their differences (Kirkness, V.J. and Barnhardt, R., 1991; Martin, P., 1993; Tierney, 1992; Steward, R.J., 1993; Williamson, M., 1994; and Rendon, L., 1995).

Options other than a college degree are being created to assist educationally disadvantaged youth. Project Focus, a Detroit based effort, involves high school drop-outs in an intensive educational experience adjusted to individual learning styles and simultaneously, a challenging work training program where performance expectations are high. This program has been highly successful in educating urban youth and providing relevant work experience. Project Focus Industries has also become a successful manufacturing service provider to the federal government and major manufacturing organizations. Project Focus has expanded its educational opportunities through (1) the development of a bachelor's degree program to be offered by a consortium of universities at Project Focus facilities and (2) collaboration and partnership with neighborhood schools from elementary to high school to provide a school-work environ-

ment (Cunningham, 1995). Many efforts, like Project Focus, are emerging to address the educational needs of a diverse population of learners.

As educational institutions prepare for the next century, demographic trends show that growth will be modest. What traditional estimations fail to capture are some important undercurrents:

- (1) An increasingly diverse traditional age population will bring a variety of culturally based needs to campus, requiring different types of responses to encourage students in staying in college and finding the campus experience rewarding.
- (2) Just-in-time, convenient delivery of services (courses) will be demanded by a larger segment of the population seeking higher education. Distance learning and the virtual classroom widen the educational interface, placing more demands on educational institutions.
- (3) For traditional age populations, college will still offer a time to grow in maturity through social experiences. Residential campuses will be expected to provide guidance in the development of values and career expectations.
- (4) Workers will engage in learning to develop skill clusters rather than obtain a degree. Curricula offerings must evolve to satisfy this demand.

Learning Styles

As more students arrived on campus over the past decade, they brought with them learning characteristics that were different from the faculty that they encountered in the classroom. Many studies have focused on the learning styles of different groups and types of students; yet Charles Schroeder's work that uses the Myers-Briggs Type Indicators (MBTI) has provided the most engaging discussion of the conflicts between faculty and student (Schroeder, 1993).

Table 9 summarizes the findings from several of Schroeder's studies. Most of the students on college campuses today mirror the learning styles of the general population—the majority are active learners. These students are described as action-oriented, pragmatic and practical. The faculty, on the other hand, is composed of completely different types of learners—the majority (75%) are reflective, abstract learners. The faculty can be described as scholarly and introspective; individuals who value knowledge, preferring to deal with the theoretical aspects of this knowledge.

These dramatic differences set the stage for misunderstandings about the outcomes of the learning process. Faculty view students as lazy and passive, only interested in gathering pieces of information in their trusty knowledge buckets while failing to capture the essence of the content delivered in verbal discussions, often using symbols. Students find the material offered

Table 9
Learning Style Characteristics of Students and Faculty Based on Schroeder's Taxonomy

	Student Distribution	Faculty Distribution	Characteristics	SAT/test	College (fr) Grades	Major
Concrete Active (ES)	50	10	Action-oriented Realists Practical Pragmatic	Avg. score 132 Take longer to read Strengths not measured by paper Hate time test	Lowest	Business Nursing Allied Health
Concrete Reflective (IS)	20	(Included with IN)	Thoughtful realists Real/Factual Careful Unhurried			
Abstract Active (EN)	20	15	Action oriented Innovators Wide interests Likes challenges to make something happen			
Abstract Reflective (IN)	10	75	Thoughtful Innovators Introspective Scholarly Value knowledge	Avg. Score 110 Quickly manipulate symbols Recognize	Highest	Art & Sciences

'Source: Schroeder, Charles C. 1993. "New Student - New Learning Styles." *Change*, Sept-Oct: 21-26.

in introductory, general education of little practical value; they want to obtain practical knowledge that has application to their endeavors after graduation. This gulf between faculty and student can be managed, according to Schroeder, through active models of teaching which would include experiential learning opportunities and field experiences.

Attitudes

The primary reason high school students pursue a baccalaureate degree has not changed much over the past twenty-five years, according to a review of survey results obtained by Alexander Astin and his group at UCLA's Higher Education Research Institute (Astin, et al., 1987, Day et al., 1991). Key considerations have included getting a better job, gaining a general education, learning interesting things, and making more money (Table 10). While the reasons have remained the same in terms of their rankings, subtle shifts have occurred in the number of students placing importance on each reason. The importance of making money increased from 50% of freshman in 1971 to 73% in 1992, reflecting the changing economic conditions of the 1970's and 1980's. Approximately 55% of the freshman in 1992 said their undergradu-

ate experience was to prepare them for graduate school; this number is significantly higher than the number that actually acts upon this intention. A more disturbing sign is the upward shift in the importance in getting away from home, not identifying suitable alternatives to college, and pressure from parents to attend. An increasingly noticeable segment of the traditional college age population is in school because they perceive that there is nothing else better to do; so they escape to the college campus.

A more dramatic change has occurred in terms of the values students bring with them to college. Again, Astin's freshman surveys provide some clues (Table 11). As the first wave of the baby boomers arrived at college (1964-1966), the values they carried centered around developing a philosophy of life, helping others, becoming an authority in one's field, and being involved in political affairs. Thirty years later, freshman values centered around being well-off financially, being recognized as an authority in one's field and raising a family. Over the same period, developing a philosophy of life dropped precipitously though Astin attributes part of this decline to recent freshman accepting "being well-off financially" as an integral component of their "philosophy of life." Light (1988) argued that this shift reflects the economic uncertainty that many students faced in the early 1970's, as families were split by divorce, significantly reducing available finances and ability to sustain a style of living. To insure that would not happen again, students placed increasing emphasis on enhancing and protecting their own financial situation.

An interesting observation of the changing value structure of college freshman is that much of the change was initiated by boomers — those entering between 1972 and 1978 — not Generation X (13th Gen) that are often identified as the changers. Further examination of these values by common clusters reveals that some values have not changed at all, others have shifted noticeably, while some have been experiencing mixed movement. Freshman who place a high importance on creative outcomes has remained constant over the two decades at around 12% to 15%. Professional values have also remained fairly constant with being an authority in one's field, being successful in one's own business, and receiving recognition for contributing to one's field being held as very to essentially important by 50% or more of freshman over the years; these values have grown in importance among students, especially since a dip in 1972. The exception is the 10% decline in the importance of having one's own business by 1992 freshman. Students indicated since the mid-1970's more value is associated with being administratively responsible for the supervision of others (tendency to view managerial positions as the preferred career path). Interest in business expertise rose modestly during a period when more undergraduates pursued business degrees.

Table 10
Important Reasons Cited by College Freshmen (in %)
For Going to College: Selected Years¹

	1971	1978	1982	1985	1992
Parents wanted me to go	23	29	33	—	34
Could not find a job	—	4	7	—	8
Get away from home	—	8	10	—	15
Get a better job	74	75	78	—	78
Gain general education	59	68	66	61	62
Improving reading/study skills	22	38	39	40	41
Become more cultured	29	34	34	33	38
Make more money	50	60	70	70	73
Learn things that interest me	69	74	72	73	73
Prepare for graduate school	34	44	45	46	55
Mentor encouraged me to go	—	—	—	—	14
Meet new/interesting people	45	57	55	—	—
Nothing else to do	2	2	2	2	—

¹Source: Astin, A.W., Green, K.C., and Korn, W.S. 1987. *The American Freshman: Twent Year Trends, 1966-1985*. The Higher Education Research Institute and American Council on Education. Los Angeles: University of California. "The American Freshman: National Norms for Fall 1992." The Higher Education Research Institute and American Council on Education. Los Angeles: University of California as reported in the Chronicle of Higher Education. 1994. The Almanac of Higher Education. Chicago: University of Chicago Press.

The central focus of freshman values has revolved around personal well-being. Financial security has moved up by more than 30% in twenty years: from 41% suggesting money was important in 1972 to 73% in 1992. Since 1972, raising a family has been consistently rated as an important value by freshman (60% or more across two decades). As financial security moved up in importance, developing a philosophy of life has steadily, at times precipitously, fallen. The decline for developing a philosophy of life may have bottomed out as 1992 freshman expressed a modest increase in importance that may reflect an increasing interest in social values and the acceptance that their finances may never be secure; so they pursue other, meaningful aspects of life.

Political involvement, particularly in national issues, has fallen by 20 percentage points; apparently only moderate interest exists among freshman to influence the political structure while about one-quarter highly valued participation in local political activities. In the late 60's, freshman were asked if they were interested in being community leaders; only a quar-

ter considered it important and the percentage dropped to 15% by 1972. The item was dropped from the survey for several years, reappearing in 1992, where 31% of the students placed importance on community leadership.

Social involvement has also been a mixed-bag. Helping others has consistently received a strong commitment from freshman for the last three decades. Yet, only a third (33%) valued improving racial understanding and influencing social values until the early 1990's. Current students have placed a greater level of importance on influencing social values and improving racial understanding that is reflected in the 10% point increase in these items. This shift is strong enough to suggest a change in attitude not experienced since the mid 1970's. Long associated with environmental action, only about 20% of freshman valued being actively involved in environmental issues. Again today's students (1992) are much more likely to be engaged in environmental activities.

What has caused some of these shifts? This current generation of students, referred to as Generation X or 13th Generation, has taken a beating in the media and from employers regarding their attitudes and outlook toward life. Popular movies, such as *Reality Bites*, have attempted to capture this generation's malaise; where jobs are not available, except at the local fast-food franchise, and the general outlook is grim. Yet, many value and attitude changes began well before the 13th Generation entered elementary school, initiated by the boomers: a group that may have been reacting to the early signals of a rapidly changing world.

Today's students' outlooks and expectations have been formed by weaving together poignant events that occurred during their childhood and secondary school years. Earlier generations have also had influential and compelling events that shaped their perceptions and behavior: World War I, the Great Depression, and World War II, for example. From Arthur Levine's comparison of the generation of the 1970's with the generation of the 1990's (Levin, 1993) and other reviews of the 1960's (Light, 1988; Strauss and Howe, 1991; and Kleinfelder, 1993), provide an interesting display of themes and events that have defined students' worlds.

These global/national events that have shaped students' lives today are different from events that shaped the lives of their parents and professors. In many ways these generations do not share much in common; therefore, emotions, feelings, and expectations are often not aligned. Because of technology and niche marketing, today's students are very contemporary, grasp aspects of contemporary issues without the historical context often used by older generations. Couple this lack of history with changes at home that involved the breakup of family, parents both work-

Table 11
Values Important to College Freshmen
(% Indicating Essential or Very Important)¹

	Boomer Years					13th Generation		
	1966	1972	1978	1980	1985	1992		
Creativity								
Accomplished performing arts	11	12	13	12	11	11		
Contribution to science	13	11	14	15	13	18		
Write original works	15	17	14	14	11	12		
Creating artistic work	15	17	14	14	11	12		
Professional Life								
Authority in field	66	61	73	73	71	69		
Recognition for contribution	43	37	50	54	55	55		
Expert-finance/commerce	13	16	—	—	26	—		
Administrative responsibility	29	24	36	39	43	41		
Successful own business	53	45	48	49	52	42		
Personal Well-Being								
Well-off financially	44	41	60	63	71	73		
Develop philosophy of life	83 ²	71	56	59	43	46		
Raise a family	71 ³	65	62	63	70	71		
Political Involvement								
Political affairs	58	49	37	40	38 ⁴	39		
Influence political structure	—	46	15	16	16	20		
Participate in community action	—	29	27	27	26	26		
Becoming a community leader	26	15	—	—	—	31		
Social Involvement								
Help others	69	67	65	65	63	63		
Racial understanding	—	—	34	33	32	42		
Influence social values	—	30	31	32	33	43		
Environmental action	—	45	27	27	20	34		

¹Source: Astin, A.W., Green, K.C., and Korn, W.S. 1987. *The American Freshman: Twenty Year Trends, 1966-1985*. The Higher Education Research Institute and American Council on Education. Los Angeles: University of California. "The American Freshman: National Norms for Fall 1992." The Higher Education Research Institute and American Council on Education. Los Angeles: University of California as reported in the Chronicle of Higher Education. 1994. *The Almanac of Higher Education*. Chicago: University of Chicago Press. ²1967 data. ³1969 data. ⁴1984 data.

	Events	Attitudes
1960's		
Assassinations	Life increasing affected by war	Need for individual distinction/individualism
Vietnam War		Rejection of social/political traditions (no party identification)
The Beatles		Deep sense of social commitment
		Sexual experimentation
	Distrust of leaders	
		Great economic expectations
		Fears of nuclear age
		Standardized curriculum in education
		Introspective, search for meaning
1970's		
Vietnam War	Life continually touched by war	Government, business corrupt
Watergate/Pentagon papers		No heroes existed
Cold War (China open)		Trust in social institutions low
Terrorism/civil wars		Focus turned inward "me"
Oil embargo		Optimistic about personal future
Unemployment		Negative about collective future
Divorce rate increases		Being well-off financially motivator
		Vocationally oriented
1980's-	Challenger	Inability to compete: economically/technologically
1990's	Cold War ends	Better place to live Fear of fragmentation Patriotic Solved no problems/created mess
		Ignorance is bliss Lost faith in society Be called on to fix things Heroes: Mom and Dad, teachers Fear of economy Cheated of opportunities Financially well-off vs. helping others

students come to campus with a very different set of baggage than that carried by those who are paid (academic and student affairs staffs) to direct often 50 plus hours per week, parents losing their jobs, and families unwilling to accept the transitions, stemming from labor market realities, their lives for four to six years. Unlike the 1970's group, however, this generation does hold out hope for a more optimistic future for everyone; still

they focus their activities, energies, and hopes toward local problems that they can solve.

Howe and Strauss (1993) contend that the Generation X student has been raised on broken promises. Based on demographics, many assumed this generation would experience reasonable housing costs, low college tuition, and higher salaries. There were fewer of them and with an infrastructure setup to handle a large baby boom population, suppliers would have to offer their goods at lower prices than their competitors. This scenario has actually played out quite differently for Xer's. For example, housing costs soared during the 1980's, increasing 294% between 1972 and 1987 (Light, 1988). This resulted in 15% fewer families owning homes under the age of 34. First-time home ownership costs went from 12% of family income in the early 1970's to 29% by the mid-1980's (Howe and Strauss, 1993).

Having built an enormous educational infrastructure to handle the baby-boomers, higher education braced for a decline; a decline that did not materialize. Instead enrollments rose (see above). The decline in state support for higher education, coupled with periods of deep economic recession, resulted in tuition going up as well. Between the 1964-65 academic year and 1992-93 year, college tuition and student fees at public universities increased by 689% or 24% per year and private universities by 906% or 32% per year. The annual rates of increase for all four-year institutions, both public and private, were around 12% per year from 64-65 to 79-80; from 1979-80 until 92-93 tuition rose at 14% and 18.6% for public and private annually (using 79-80 as the base). Two-year colleges were not immune to increases either, moving from relatively inexpensive institutions (\$100 per year) to moderately priced colleges (\$1229); tuition grew by 1141% or 39% per year. Table 12 reflects these tuition changes.

College tuition increases may not have hurt families so badly if family incomes had been increasing at a similar rate. Yet, the 1980's was not a good time for income improvement among most Americans. Family incomes, except for the very highest income levels, declined during the decade and into the 1990's. Friedman (1995) reported the average weekly earnings in 1972 was \$474 and in 1995 was \$385. A full-time white male earned \$35,000 a year compared to \$32,000 in 1994. Family incomes have remained essentially unchanged, even with the increase in two family incomes. For some families to maintain income, both adults work longer hours and one possibly more than one job. While income has gone down against inflation, Light (1988) documented these drains on family income between 1972 and 1987: federal taxes up 282%; social security taxes 331%; state and local taxes 520%; and average car prices 218%.

**Table 12
Changes in Tuition and Fees for College Students:
1964-65 to 1993-94 (in dollars)¹**

	Universities	Four Year Colleges	Two Year Colleges
1964-65	298	1297	99
1969-70	428	1809	178
1974-75	599	2614	277
1979-80	840	3811	3225
1984-85	1386	6843	5556
1989-90	2035	10348	1780
1992-93	2352	13043	2352
1993-94	—	—	2527

¹Source: The Chronicle of Higher Education. 1994. *The Almanac of Higher Education*. Chicago: University of Chicago Press.

Table 13 shows that for Michigan State University graduates overall starting salaries have increased by about 7% per year, moving from approximately \$13,500 for the 1978-79 academic year to just under \$29,000 in 1994-95. This increase has essentially kept pace with inflation, as 1994-95 salaries indexed to 1978-79 were \$13,466. After showing some gains in salary in the mid-1980's, engineering salaries (the highest paid undergraduate majors) have leveled off in current terms and lost value when deflated. Business starting salaries actually gained in the late 80's, but have failed to keep pace the last five years with inflation. The bright spot is found among liberal arts graduates who have seen their salaries increase faster than inflation between 1990 and 1995 but not fast enough to offset losses incurred in the mid 80's. Liberal arts majors may be catching up because: (1) technical salaries have peaked with employers not wanting to go much higher for new hires; (2) their best skills (interpersonal communication and cross-disciplinary problem solving) are being emphasized in the new economy; and (3) the types of jobs liberal arts majors usually find after graduation are being upgraded to account for technology. Nevertheless, the starting salary trends flounder in comparison to tuition increases over the same period. There may be little joy in this enumeration once the first student loan payment becomes due.

The New Economy

The new economy has brought with it a new consumer. Conceived in the latter half of the 1970's, boomers focused their purchasing behavior on immediacy, personalization and value (Russell, 1995). The 13th Gen refined these expectations: high quality, "just in time," convenient and rea-

sonable cost. College students are powerful spenders — knowing how to purchase electronics, cd's, household supplies, and much more. They still are unsophisticated when it comes to purchasing higher education services. But it is only a matter of time before that changes.

Table 13 Average Starting Salaries for Bachelor's Degree Graduates from Michigan State University: Current and Real Dollars (Index 1978-79)									
	All Graduates		Engineers		Business		Liberal Arts ²		Preliminary Estimates.
	Current	Real	Current	Real	Current	Real	Current	Real	
1978-79	13,444	—	18,136	—	13,498	—	12,483	—	
1984-85	20,169	13,181	27,298	17,842	20,114	13,146	17,467	11,407	
1989-90	24,167	13,134	31,113	16,909	24,850	13,505	21,575	11,725	
1994-95	28,951	13,466	35,638	16,576	28,020	13,033	26,476	12,314	

¹Combine: Social Sciences, Natural Sciences and Arts and Letters Academic Programs.

²Preliminary Estimates.

Ritchie's (1995a) examination of the Generation X or 13th Gen market revealed interesting insights into this group's behavior. The first thing she noticed about 13ers was the speech pattern: a pattern that drives boomers nuts. To boomers "the rising inflection" sounds like a constant whine that conveys questioning and uncertainty. So boomers respond with a helpful hand, fatherly advice, and a ten-step program for success (study skills, college major selection, job search skills, etc.). This response fails to excite 13ers because they are communicating a different message: a message that accepts differing points of view that should be heard. Young people seek information and confirmation this way and resent unsolicited advice.

Built around this communication style are new consumer patterns and preferences that distinguish 13ers from boomers (Ritchie, 1995b). Younger generations have hype in the advertising for programs and services. Raised on commercials that hawked products that failed to deliver, they are leery of services that may not provide what they perceive they need. This challenges boomer faculty and support staff who often assume what students need, based on their own experiences, and are frustrated when no one shows for a program or find it boring. Other traits of the younger generation:

1. Little brand loyalty. Young purchasers, choosing from wide variety of items, do not stick to one brand. As educational options increase expect them to scan what is available and select the one response to their circumstances. As career development (school-to-work) becomes a component of K-12 education, future consumers of higher education will be looking for a similar component.

2. While many boomers have reached a "technology saturation point" (Ritchie, 1995b), a large segment of the young thrive on personalizing and humanizing new concepts. Expect them to be better consumers through electronic avenues and mold what is on the Internet (educational and counseling) to their lives. Technology enhances the immediacy and value of the knowledge they seek.
3. They seek validation from their peers so they are more likely to react to the success and advice of generational members who have succeeded in spite of the media voice. By far, Microsoft's Bill Gates represents the best to young generations.
4. Being pragmatic, they like to solve small, practical problems and will accept the challenge of developing a response to an issue. Just do not expect them to follow boomer rules or processes. Having trouble delivering career or co-op programs to this group, let them devise their own way.

Conclusion

As we approach the 21st century, colleges will experience new students with different expectations. Simple demographics suggest a more diverse population both in cultural background and age. Because the new economy will demand more skills, future workers will be seeking alternative ways of enhancing their skills/competencies. These students may not be as loyal as previous generations and more willing to seek other options if the value of the services (education) they purchase fail to equate to the cost. The challenge for educational institutions and employers is to understand these trends and develop responses that tap into the needs of both the young generations and middle age generations.

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