

Environmental Scan, 2007

For Academic Plan, as of Feb 4, 2008

Miscellaneous Documents

(Contributed during the Planning Process)

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WHAT PROFESSORS AND TEACHERS THINK

A Perception Gap Over Students' Preparation

2 companion 'Chronicle' surveys show that college professors are much more concerned than school teachers are about the writing abilities of freshmen

By ALVIN P. SANOFF

Ask college faculty members about the high-school graduates coming into their classes: Many will tell you that students are ill prepared for the demands of higher education. Ask public-high-school teachers the same question: While they acknowledge student shortcomings, their answers will be more positive.

That's what *The Chronicle* found in companion national surveys, one of college faculty members and one of high-school teachers. In particular, professors and teachers differ significantly in their assessments of students' writing ability. Forty-four percent of faculty members say students are not well prepared for college-level writing, a view held by only 10 percent of teachers. Just 6 percent of professors view students as very well-prepared writers, compared with 36 percent of teachers who see them that way.

There is also a large gap in views of mathematics readiness. Thirty-two percent of faculty members say students are not well prepared in math, a judgment shared by 9 percent of teachers. Conversely, 37 percent of teachers say students are very well prepared in math, compared with only 4 percent of faculty members.

The surveys, designed to compare the views of college faculty members with those of high-school teachers, were conducted for *The Chronicle* by Maguire Associates, a Boston-area research and consulting company that also analyzed the results. The findings are likely to add fuel to a growing debate over whether students graduate from secondary schools prepared for the rigors of college.

Asked about students' overall preparation for college, 84 percent of faculty members — compared with 65 percent of teachers — say that high-school graduates are either unprepared or are only somewhat well prepared to pursue a college degree. Almost one-fourth of faculty members say flatly that students are not prepared. Just 12 percent of teachers agree with that assessment.

Conversely, more than twice the proportion of teachers as compared with faculty members — 36 versus 15 percent — say that students are either very or extremely well prepared. Teachers at schools where the proportion of low-income students is 10 percent or below are most likely to hold a positive view.

When asked about students' abilities and attitudes in several specific areas, faculty members say that students are inadequate writers, have trouble understanding difficult materials, fall short in knowledge of science and math, have poor study habits, and lack motivation. A professor in the social sciences at a public university in Louisiana who responded to the survey complains that "students don't know how to study, how to organize and retain the information, or how to apply it."

Many of the faculty members who are particularly troubled by shortcomings in writing volunteered comments about their concerns. Typical is an English professor at a public university in Pennsylvania: "In composition, students are usually unaware of what it takes to write even a four- to five-page essay every two or three weeks. One reason is that they are not asked to write in quantity for high-school English classes."

A social-science professor at a public university in California says that there is a need for "writing, writing, and more writing. Written preparation, at least in my school, is the weakest link."

Indeed, professors are much more likely than their high-school counterparts to require a significant amount of writing in their classes. More than 70 percent expect students to at least occasionally write papers of more than five pages. That is true of just 39 percent of high-school teachers. Sixty-one percent of teachers never ask students to write papers of more than five pages. That is true of only 28 percent of faculty members.

Particularly large gaps were apparent in assignments in English and in the social sciences and history. Fifty-four percent of high-school teachers in the social sciences and history never require papers of more than five pages, as compared with just 13 percent of faculty members in those academic areas. Twenty-five percent of English teachers never assign longer papers, as compared with just 6 percent of their college counterparts.

A much smaller gap appears when it comes to shorter writing assignments. More than 80 percent of both college and high-school instructors require papers of one to five pages from time to time, and 40 percent of faculty members and 33 percent of teachers assign short papers at least a few times a month.

Unlike faculty members, teachers feel that students are fairly well prepared in writing, science, and math. But they agree with faculty criticism of students' study habits and motivation. "I see more and more students who expect a high grade for a minimal amount of work," says an English teacher in Ohio. And a number of teachers fault parents. A science teacher in Colorado complains that "parents require too little and do not supervise study habits."

In the arena of college admissions, which is fraught with stories of students facing steeper and steeper competition at the most selective institutions, half the faculty members say their institutions have, in fact, become more selective in admissions. (Faculty members at nonsectarian private institutions are the most likely to hold that view.)

Despite that, many faculty members feel that today's students are not as well prepared as their counterparts of 10 years ago. An English professor at a public university in Ohio says that "when I give reading quizzes, they frequently complain that the questions are too difficult. Several years ago, students were more likely to say that the quizzes were too easy."

The observations of an engineering professor at a public institution in North Carolina might explain the seeming contradiction between higher admission standards and lesser student preparation. She says her students fall into two distinct groups: "eager, well prepared, and hardworking, and clueless with terrible study habits and low motivation. The gap between the two groups is growing."

Comparison of the two *Chronicle* surveys also reveals:

- **When it comes to homework**, 65 percent of faculty members and 66 percent of teachers say students do less than they would like them to do. Forty-eight percent of faculty members — compared with 17 percent of teachers — expect students in their courses to do six or more hours of homework weekly. The majority of high-school teachers — 55 percent — expect students to do three to five hours of homework a week, while 28 percent expect zero to two hours. "Most of my students have a do-just-enough-to-get-by mentality," says an English teacher in Tennessee. "I don't assign homework because I will never get it back."
- **When asked about reviewing material in class**, faculty members and teachers say that a lot of their time is spent going over work that students should have learned earlier. More than half the teachers and almost one-third of the faculty members spend more than 21 percent of class time doing that. A mathematics professor at a public university in Georgia complains that students "expect to forget what they learn — it's enough to just get the grade."
- **When evaluating high-stakes tests**, both groups are uncertain about their impact and usefulness. Many states have turned to such exams to comply with the federal No Child Left Behind law. But a plurality of faculty members, 45 percent, feel the tests have no impact on students' preparedness, while 29 percent say they have a slight or substantial positive impact, and 26 percent say they have a slight or substantial negative impact. Asked for their level of agreement with the statement that "high scores on the tests indicate that a student is well prepared for college," high-school teachers come down squarely in the middle, neither agreeing nor disagreeing.

As to their views on whether SAT, ACT, and Advanced Placement tests are reliable indicators of student readiness for college work, faculty members and teachers tend to agree that there is a relationship between test scores and student preparedness. Faculty members, however, are substantially less positive than the teachers that passing scores on AP tests signify that students can do college-level work. "I'd like to see advanced-placement courses eliminated," says an English professor at a private university in Colorado. "They foster a false sense of preparedness when they are not equivalent to college-level work."

- **When asked whether they understand very well what's required for students to succeed in college**, more than two-thirds of the teachers say they do — even though only 11 percent say that colleges are very successful in making academic expectations clear to them. An even lower proportion of faculty members — 5 percent — believe their institutions are very successful in making academic expectations clear to high-school teachers. Consistent with that, 37 percent of faculty members say that public secondary-schools fail to adequately convey to students what colleges expect of them academically, and 60 percent say schools convey that information only somewhat well.

Over all, both teachers and faculty members agree on an urgent need for better communication and greater interaction among high schools and colleges.

"I think colleges need to start listening to high-school teachers more than just dictating what they expect from high-school students," says a professor in the sciences at a public university in Illinois.

An English teacher in Rhode Island says that "the only way we as teachers know what is going on in colleges across the state is when former students come back to visit us and tell of their experiences."

Both groups also offer ideas on how to improve the status quo. A mathematics teacher in California suggests developing a mentor program through which secondary-school students learn from undergraduates what will help them succeed academically in disciplines that interest them. An English professor at a public university in Massachusetts proposes that faculty members attend parent-teacher-association meetings in high schools to stress the importance of good writing and math skills, while an English teacher in California would like to see colleges offer writing seminars for high-school students.

Clearly, faculty members and teachers feel strongly about how well prepared today's students are for college. One indication: More than three-fourths of both groups took time to offer comments that go well beyond the questions asked in the surveys. Reflecting the views of a number of respondents, a science teacher in North Carolina says that, for students to be better prepared, "the entire education community needs to work together."

<http://chronicle.com>
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Excerpts about Citizenship and Liberal Education

2001 BC University Baccalaureate Graduate Survey
Report of Findings

The Class of 1996 Five Years after Graduation

Prepared for
The University Presidents' Council
Of British Columbia

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SOCIAL ENGAGEMENT

A university education affects the whole individual: it provides not only job skills and related knowledge, but also contributes to personal development and a developed awareness of one's place in society. An individual's productive relationship to society (one that facilitates coordination and cooperation for mutual benefit) has been labelled "social engagement" by researchers. Recent research has raised the concern that North Americans are becoming less socially engaged (i.e. less volunteering, less membership in charitable organizations, less politically active, etc.). Robert Putnam (1995), perhaps the best-known writer on this subject, has illustrated the changing patterns of social engagement by tracing the decline of activities and organizations that play a role in social, political, and civic participation.

The patterns of social engagement are changing despite the increase in an educated populace, education being the best predictor of civic participation (Ehrlich, 2000). In some respects the level of engagement can be seen as an outcomes measure for the post-secondary system, as well as a baseline for the future, as universities, through service learning and other innovative programs, attempt to enhance and develop this important aspect of the university education.

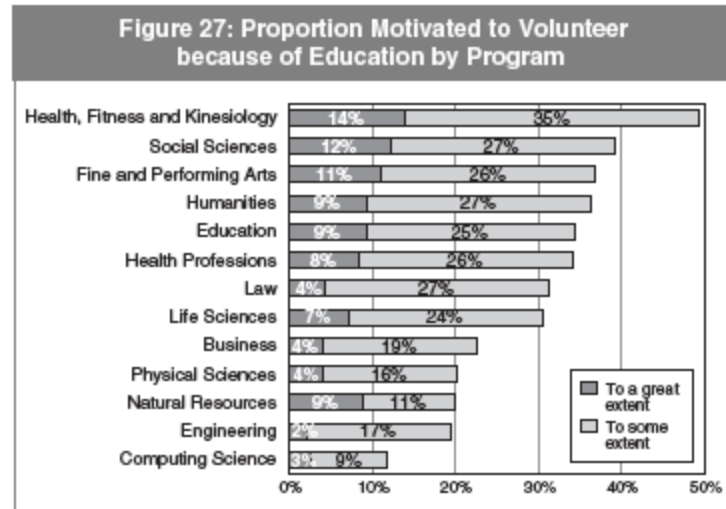
VOLUNTEERING

Graduates were asked about their volunteering activities, charitable donations, and group involvement. Educational attainment proved to be a strong indicator of civic engagement. This may be due to the fact that educated individuals are more likely to understand that their communities have real needs and that they can take action on a personal level to help meet those needs.

Volunteer rates significantly increase with level of education. Over half of the university graduates (59%) acted as an unpaid volunteer for an organization, fundraising campaign, association, or event in the last 12

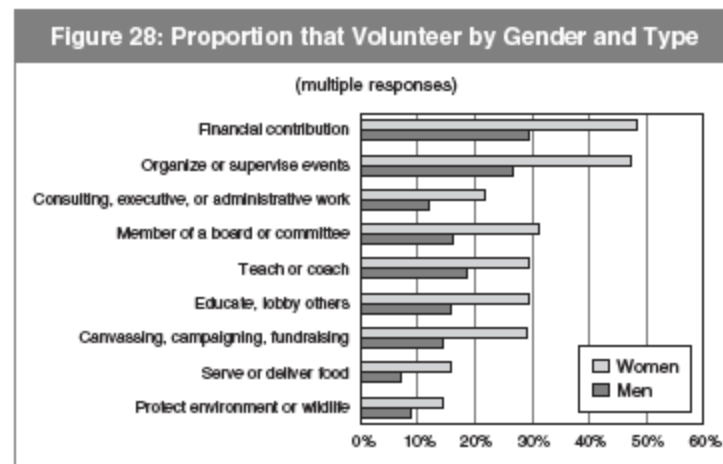
months. Graduates' high volunteer rate was partly due to the inspiration from their university education. Graduates who were motivated to volunteer as a result of their education were more likely to act as a volunteer ($r = .77, p < 0.01$).

Figure 27 shows that the extent to which graduates were motivated to volunteer varied by program. Almost half of the graduates from Health, Fitness and Kinesiology (49%) were motivated by their education to volunteer. The other programs that highly motivated graduates to volunteer were Social Sciences (39%), Fine and Performing Arts (37%), and Humanities (36%). Graduates who were least likely to be inspired by their education to volunteer were all in science programs—Physical Sciences (20%), Natural Resources (20%), Engineering 19%, and Computing Science (12%).



Gender also determined the extent to which graduates both volunteered and were motivated to volunteer because of education. More women (37%) than men (28%) said education has motivated their volunteerism, and more women (61%) than men (55%) volunteered. Figure 28 shows that this is true for many types of volunteering, including

more traditional contributions by men, such as making financial donations and acting on boards or committees. On average, women volunteered 13% more than men, with women especially favouring volunteering that involved canvassing, campaigning, and fundraising; acting as a member of a board or committee; organizing or supervising events; and making financial contributions.



The likelihood of graduates volunteering in the past 12 months was influenced by equity group membership. Graduates who belonged to a visible minority group volunteered significantly less than other graduates, with only 52% of them acting as unpaid volunteer as compared to 60% of graduates that were not part of a visible minority group. In contrast, Aboriginals (73%) and persons with disabilities (61%) volunteered a great deal more than did other graduates.

Volunteer rates differed drastically according to program (see Figure 29). For instance, Computing Science graduates had a very low volunteer rate, with only one-third of graduates doing unpaid work in the last year, as compared to three-quarters of Law graduates. Programs with high-income levels, with the exception of Law, had lower volunteer rates (only about half volunteered among graduates from Engineering,

Business, Physical Sciences, Health Professions, and Natural Resources). Programs in the low-income tier, such as Education, Health, Fitness and Kinesiology, Fine and Performing Arts, Humanities, Social Sciences, and Life Sciences, had much higher volunteer rates, with approximately 62% of graduates volunteering.

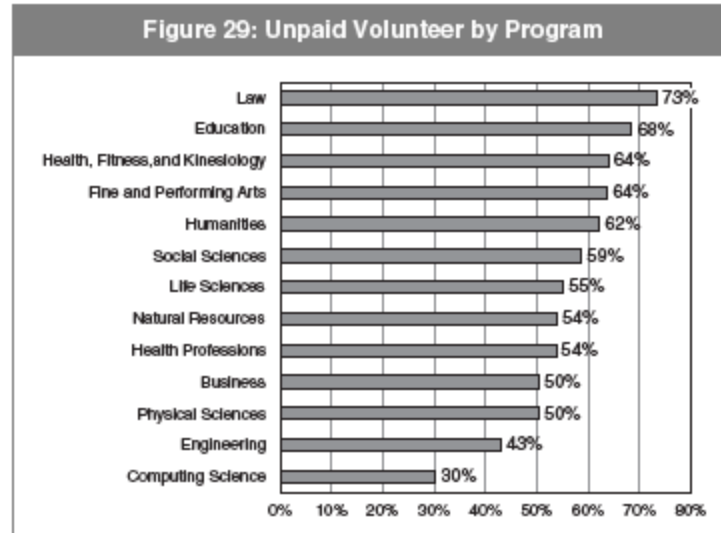
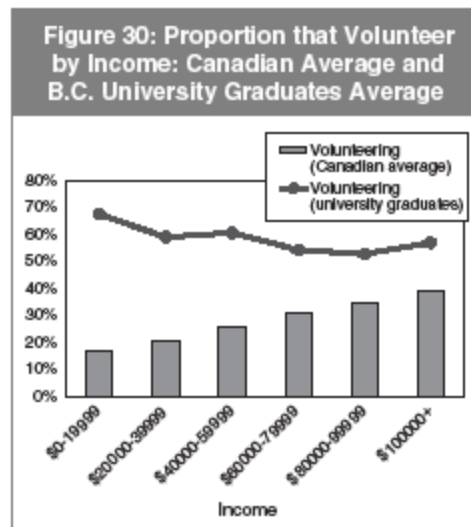


Figure 30 shows the vast difference between the volunteer rates for university graduates as compared to the national average. On average, university graduates volunteered 31% more than other Canadians, and had a higher volunteer rate in all income categories.

More surprisingly, Figure 30 asserts that (for all Canadians) as income rises, volunteerism increases, but that this is untrue of our graduate respondents: those with higher income levels were the *least* likely to volunteer ($r = -0.80, p = 0.05$). For example, 68% of graduates with incomes below \$20,000 volunteered in the last year, as compared to only 57% with incomes above \$100,000. It's possible that even at five years out, the majority of survey respondents were still quite young and establishing their careers (even if they're making high incomes).

Graduates may be very much focussed on their jobs, perhaps putting in extremely long hours, and possibly starting families which is very time-consuming—all of which leaves little time for volunteering. The Canadian statistic includes all age groups and probably has people whose careers are better-established and with children a little older, therefore allowing more time for volunteer activities.

Of those that volunteered, the majority (54%) of graduates did so for less than 100 hours in the past 12 months, and 22% of graduates volunteered between 100 and 200 hours. A very socially-engaged 14% of graduates volunteered over 200 hours, with an indefatigable 4% volunteering over 800 hours in the last year.

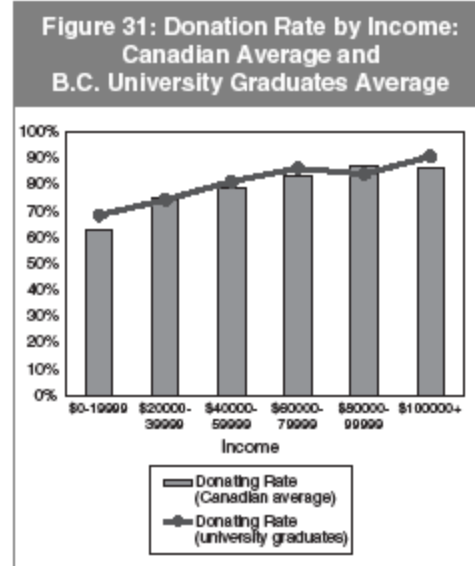


DONATING

The likelihood of making donations to charitable and non-profit organizations did increase with income level (see Figure 31). The highest donation rate among graduates was for income levels above \$100,000 (91%), while many of those with salaries below \$20,000 still donated (68%). The high donation rate for those with low annual salaries negates the belief that making a charitable donation is totally dependent on the financial capacity to give. Values and attitudes related to giving and opportunities to give also influence the likelihood of making a charitable donation. Unlike the high rates of volunteerism, though, donation rates

were no higher for university-educated respondents than were the rates for the Canadian public.

The median amount donated by graduates in the past year was approximately \$200, with the largest donation being \$100,000. Almost



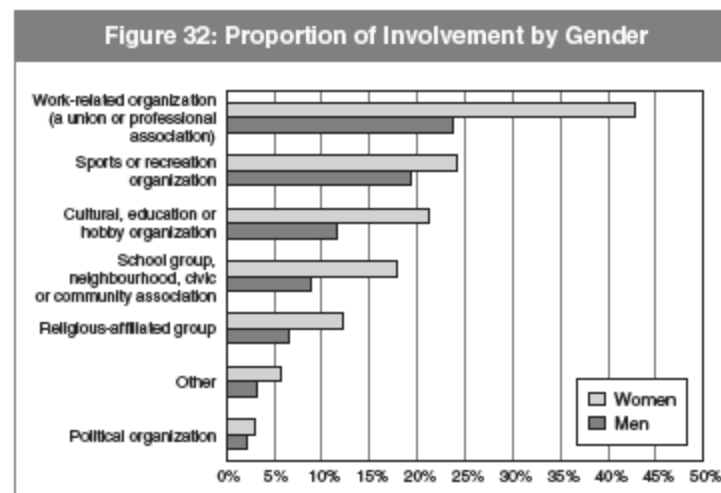
half the graduates donated between \$50 and \$250. The other amounts contributed varied considerably, with 14% of graduates donating between \$250 and \$500, 12% between \$500 and \$1000, and the other 20% over \$1000 (including 6.4% of graduates who donated over \$10,000).

As would be expected, the *amount* contributed increased with income. The majority of graduates that donated over \$250 were in the high-income range, whereas the majority of those that donated under \$250 were in the low-income range. Although income level is somewhat of a predictor of whether a graduate donates, it is a much stronger predictor of the amount.

COMMUNITY INVOLVEMENT

There were linkages among group involvement and individuals' charity. Graduates that belonged to a group or organization were more likely to donate and volunteer than those that did not ($r = 0.81, p = 0.01$). Increased civic participation among graduates would likely lead to greater volunteerism and increased charitable donation. As seen in Figure 32,

most graduates were involved in a work related organization (67%); sports or recreation organization (44%); or cultural, education or hobby organization (33%). Less than a quarter of graduates were involved in a school group, neighbourhood, civic or community association, religious-affiliated group or political organization.

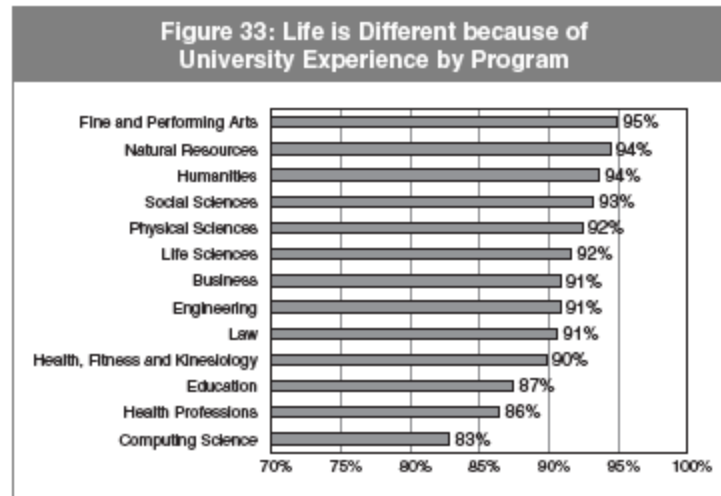


The lowest involvement was seen in political organizations (5%). Other studies of young Canadians (i.e. Putnam, 1995) show a trend toward decreasing interest and involvement in political activities, both of which are needed for a democracy to work. Universities may wish to make a commitment toward civic engagement, either by encouraging social activities in higher education or preparing graduates to become engaged citizens who get involved in and take action to further collective civic goals.

As well, a small percentage of graduates surveyed indicated involvement in religious-affiliated groups (19%). Less involvement in religious groups can partially explain declining community involvement, since religious groups tend to get involved in other groups and charities throughout the community. In fact, graduates affiliated with a

religious group had higher involvement rates in almost all other types of organizations. As Robert Putnam (1995) pointed out, members of associations are more likely than non-members to participate in politics, spend time with neighbours, and express social trust.

As part of the survey, graduates were asked if their life outside work was different today because of their total university experience (see Figure 33). On average, 91% answered affirmatively, with Fine and Performing Arts (95%), Natural Resources (94%), Humanities (94%), and Social Sciences (93%) graduates most affected by their university experience.



Graduates from programs that had jobs more related to their education were least likely to say they had a different life as a result of university ($r = 0.69, p < 0.01$). To some extent, there appears to be a trade-off between obtaining highly related job skills through university studies, or having a different life as a result of the educational experience. Evidently graduates from the humanities and social sciences are more likely to think about and respond positively to the non-job related aspects of their education.

Excerpts about Citizenship and Liberal Education

I'm Glad You Asked

A Digest of Publications
from the BC College and Institute
Student Outcomes Survey
1996–2006

Ministry of Labour and
Citizens' Services

Ministry of
Advanced Education

College & Institute
Student Outcomes

December 2006

DEVELOPING CITIZENS: THE ROLE OF PERSONAL AND SOCIAL DEVELOPMENT IN EDUCATION

Issue paper using 2000 data, published in 2001 (Vol. 2 No. 2 Autumn 2001)

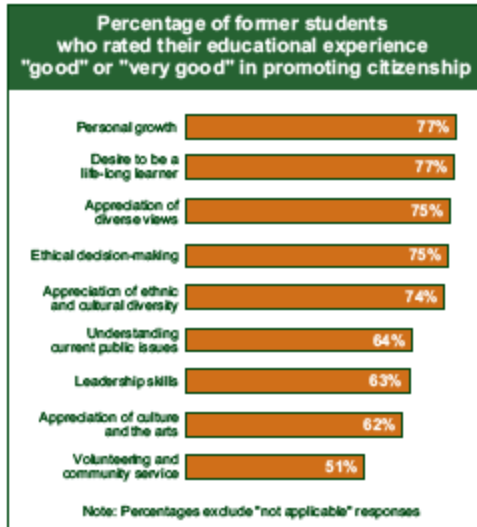
An important function of education is to help students develop into socially responsible, mature citizens who understand current public issues, appreciate the arts and life-long learning, and who accept diverse views in a multicultural society.

The majority of former students who rated items on citizenship preparation thought that their programs and broader educational experiences did a good job of helping them to develop in several personal and social areas.

In general, students who were satisfied with their studies or who were from people-oriented programs (e.g., education or nursing) gave higher ratings, as did females and older students. Females tend to gravitate towards people-oriented programs.

Depending on their program, a significant proportion of respondents reported that some citizenship questions were "not applicable." Personal growth and the desire for life-long learning were seen as the most applicable, while volunteering and community service were the least applicable, followed by appreciation of culture and the arts.

The programs with the highest proportion of not applicable responses were also those with the highest proportion of males, e.g., construction and transportation. Younger respondents tended to say personal and social development were applicable, irrespective of gender. Former students with previous post-secondary experience, on the other hand, were slightly less likely to report that the citizenship questions were applicable to them.

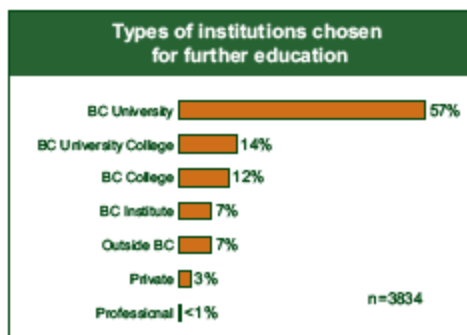


(A related paper is The Generic Skills Needed in the Labour Force summarized in the Labour Market section.)

FURTHER EDUCATION OF FORMER ARTS AND SCIENCES STUDENTS

Issue paper using 2000 data, published in 2001 (Vol. 2 No. 1 Summer 2001)

Almost all Arts and Sciences courses are university transferable, facilitating the movement of students between institutions. The CISO project surveys former Arts and Sciences students who have completed at least 80 percent (24 credits) of their first year. Of these, three-quarters go on to further studies after leaving their original post-secondary institution. In 2000, the majority of those continuing their studies went to a BC university.



The likelihood of going on to further education increases with the number of credits earned in the original institution and decreases with age. Younger respondents were more likely to go to a university, whereas older respondents were more likely to enrol in a university college or an institute.

When continuing their education, former Arts and Sciences students seemed more intent on getting into their preferred program than attending their first choice institution: 95 percent were in their preferred program, compared to 89 percent in their preferred institution.

Eighty-four percent were able to enrol in all the courses they wanted in their first term of subsequent study, although the rate varied across institutions from a low of 69 percent to a high of 96 percent. Course credits generally transferred successfully.

Most students perceived a connection between their former studies in the Arts and Sciences and their subsequent studies, especially if they went to a university. However, this perceived connection does not necessarily mean they remained in Arts and Sciences. Because these courses are foundational for studies in a number of professional fields, only about half the respondents remained in Arts and Sciences. Others went on to business programs, education and library science, social and legal programs, and many others.

Ninety percent of respondents felt prepared for further study, although only about half felt "very well" prepared. Those going to university felt better prepared than those who went to a college or a university college (perhaps reflecting the greater propensity of students entering college or a university college to have switched fields of study.)

1998 OUTCOMES OF FORMER ARTS AND SCIENCES STUDENTS

Special report (23 pages) using 1998 data, published in Spring 2000

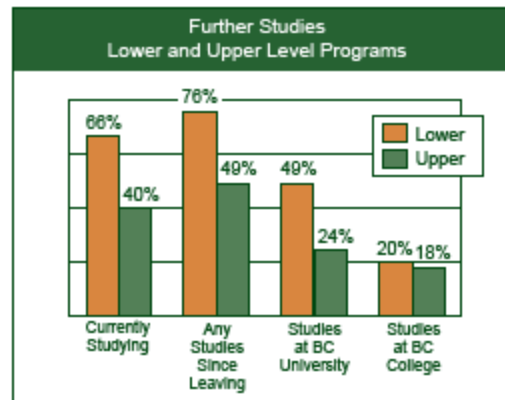
The outcomes of lower division (1 and 2 year) Arts and Sciences students need to be distinguished from former students who completed upper division at a university college, i.e., who were in years 3 and 4 of a bachelor's degree program. Upper division former students were much more likely to be in the labour force and less likely to continue their studies than were lower division respondents.

Former Arts and Sciences students tended to be female and young—61 percent were female, and 66 percent were age 25 or younger at the time of the survey. Almost all were high school graduates (high school graduation is not necessarily an admission requirement for colleges). Ten percent had already obtained a post-secondary credential prior to enrolling in their Arts and Sciences program.

Respondents had many reasons for enrolling in their programs; overall, employment-related reasons were less important than goals for academic attainment. Older students were more likely than younger ones to feel they met their goals. Most of the former students who had academic goals when they enrolled said they met them; those with job-related goals were less likely to have achieved their objectives.

Although academically oriented, three-quarters of respondents were in the labour force at the time of the survey. Completing higher education had a positive effect on employment, leading to positions in highly skilled occupations. Approximately 64 percent of employed upper level respondents who were no longer studying were working in technical, paraprofessional, professional, or managerial positions. Lower division respondents were most frequently in Sales and Services occupations. The occupations of lower level respondents after they left their programs resembled those that upper level respondents had before they left.

Sixty-four percent of former Arts and Sciences students were studying at the time of the survey and a further 10 percent had enrolled at some point during the year between leaving college and participating in the CISO survey. Almost half of the lower division respondents who were studying were at a university; the majority were in a field of study that they considered to be a natural progression from their former studies. Close to 90 percent felt well or very well prepared by their Arts and Sciences programs.



Memorandum

To: Strategic Enrolment Management Committee
From: Bob Cowin (Institutional Research)
Date: 19 November 2007
Subject: University Eligibility of Douglas College's Entering Students
(FOR INFORMATION)

According to a June 2006 newsletter from BC's *Student Transitions Project (STP)*, about 30% of the BC high school graduating class is university eligible (based on a minimum GPA of 75% in English 12 and the student's best three provincially-examinable courses.)

Digging into this autumn's STP database for Douglas College, it appears that of the recent high school graduates who enrolled at Douglas College from 2002/03 to 2005/06, about 15% were university eligible when they left high school. A quarter took the academic courses needed for university entrance, but did not achieve a 75% average. The majority (60%) did not take sufficient academic courses to be considered for university.

University Eligibility of Douglas College's Recent High School Graduates



The STP data clusters Douglas College's enrolment into ten program areas. As reported in the attached table, in no program cluster were more than one-fifth of Douglas' recent BC high school graduates also eligible to attend university directly out of high school.

c. S. Witter

Attach.

University Eligibility of Douglas College's Recent BC High School Graduates

*Enrolled at Douglas College from 2002/03 to 2005/06 within three or fewer years of high school graduation.
Based on 75% minimum GPA in English 12 and best three other provincially examinable Grade 12 subjects.*

Program Cluster at Douglas College	Not Eligible		University Eligible	TOTAL	Percent Eligible
	Have courses, but not grades	Lack academic courses			
Applied Sciences	6	20	4	30	13%
Commerce and Administration	239	560	120	919	13%
Developmental Programs	37	410	20	467	4%
Education	7	59	6	72	8%
Fine and Performing Arts	39	114	21	174	12%
Health Sciences	20	115	15	150	10%
Human Services	2	21	2	25	8%
Humanities and Social Sciences	1,151	2,387	667	4,205	16%
Interdisciplinary and Others	56	150	39	245	16%
Law	4	60	2	66	3%
Total	1,561	3,896	896	6,353	14%

Source: Student Transitions Project, October 2007 Pivot Table

Higher Education and the Labour Market

Excerpts from a talk delivered by Howard Bowen to the Association of Graduate Schools (USA) in 1974

“In the United States today the free-choice principle is under attack and increasing attention is being given to the manpower principle. Obviously, some degree of balance in distribution of people among vocations and professions is desirable. Nevertheless, I believe these ideas [about centrally planned education designed to supply the “right” quantities of each type of manpower] are riddled with fallacies and misconceptions.

Misconception 1

...the economy requires a more or less fixed inventory of occupational skills at each stage of its evolution. On the contrary, in some cases, if people cannot be found to perform certain kinds of work, the economy can learn to do without and invent. That the skill requirements of the economy are not fixed and predetermined is demonstrated by the amazing speed with which we can mobilize for war and reconvert to peace – conditions that provide quite different lists of jobs. It is also demonstrated by the fact that different countries operate advanced and fully employed industrial economies with quite different inventories of educational backgrounds and occupational skills.

Misconception 2

...we can predict the character of the economy and its skill requirements for periods long enough to be pertinent to educational planning. Education has a time perspective of forty to sixty years.

Our future skill requirements are quite indefinite. The manpower requirements depend on what it is we want to do. Education is an active generator of values, not merely a passive adjuster to them.

Misconception 7

...the market for educated workers should be conceived solely as a national market. Even if the United States became saturated with educated talent, a reverse brain drain, especially if directed towards the developing world, would be extraordinarily constructive.

Community colleges in particular are often consciously geared to supplying manpower for local industries. Such a policy is obviously restrictive, in view of the geographic and occupational mobility of the American people and the change over time in the character of local employment.

Misconception 8

The final misconception is a deeply ingrained one. It is that the basic purpose of education is to prepare people for quite specific jobs, and that it is somehow wrong or wasteful to provide an education that will not be directly used vocationally. This opinion is based in part on the singularly unimaginative concept of a rigid, one-to-one relationship between education and jobs. One of the peculiar myopias of our time is the failure to see that the entry of people of diverse educations and interests and backgrounds into business and public affairs is a source of new ideas and outlooks. It is no mark of failure, rather a mark of success, that education – even strictly vocational education – has

wide applicability and produces flexible and versatile people. This is especially so because career change has become commonplace and is desirable in a dynamic economy.

Also hidden within this criticism is the idea that people with college degrees should not be employed at work that is not commensurate with their education. No thought is given to the fact that well educated people have something valuable to bring to the public schools and businesses and to other parts of our social life outside the narrow niches we have conventionally carved out for them.

Conclusion [still quoting Bowen]

I believe that the manpower theory of educational planning is based on a grand fallacy that permeates our culture. This is what I call the input-output or the means-end fallacy. We tend to think of our world as being divided into inputs, primarily in the form of effort or work, and outputs, primarily in the form of economic goods and services. We forget that the so-called inputs are as much of our lives as the outputs.

It may be quite legitimate for people to choose vocations and styles of work that are personally rewarding even if not as productive, in the sense of adding to GNP, as other kinds of employment. This point tends to be lost on those who think of education as producing manpower which should be deployed to maximize the dollar value of output.

Perhaps my most far-reaching conclusion is that education is not designed to prepare people to do whatever work flows from the blind and predestined imperative of technology; rather it is intended to educate people of vision and sensitivity, who will have the motives to direct technology into humanly constructive channels.”

Howard R. Bowen was an economist specializing in the economics of higher education. He was dean of the Business School at the University of Illinois and served as president or chancellor at Grinnell College, the University of Iowa, and the Claremont University Center.

Predictive Power of Admissions Tests

W. James Popham, emeritus professor in the UCLA Graduate School of Education and Information Studies, in:

Popham, W. (2007) *A Less-Than-Savvy Answer*, Educational Leadership (November 2007), pp. 84 – 85.

“Admission tests are indeed helpful in predicting how well a student is apt to do in college – but this information is much less useful than most people think. A student’s scores on admission tests can accurately predict about 25 percent of the grades he or she will earn in college. Fully 75 percent of college grades are attributable to nontest factors, such as a student’s motivation, effort, and study habits....

...although high or low scores on college entrance tests may be somewhat predictive of how well students are likely to do in college, it’s what a student actually does after arriving on campus that governs college success. A student’s *effort*, not test scores, makes most of the difference.”

George D. Kuh
Indiana University Center for Postsecondary Research and Planning

Framework & Psychometric Properties, Page 1 of 26

The National Survey of Student Engagement: Conceptual Framework and Overview of Psychometric Properties

What students **do** during college counts more in terms of desired outcomes than who they are or even where they go to college. That is, the voluminous research on college student development shows that the time and energy students devote to educationally purposeful activities is the single best predictor of their learning and personal development (Astin, 1993; Pascarella & Terenzini, 1991; Pace, 1980). The implication for estimating collegiate quality is clear. Those institutions that more fully engage their students in the variety of activities that contribute to valued outcomes of college can claim to be of higher quality compared with other colleges and universities where students are less engaged.

Terenzini, Patrick T. and Pascarella, Ernest T. (1994). *Living with Myths*. Change (vol. 26, no 1.), p.28 – 33

Does higher education have its own dysfunctional myths? From 1985 to 1990, we reviewed some 2,600 books, book chapters, monographs, journal articles, technical reports, conference papers, and research reports produced over the past two decades describing the effects of college on students (Pascarella and **Terenzini**, 1991). Based on that literature, we can identify at least five myths about undergraduate education in America. Faculty members and administrators alike embrace these myths, which structure how we think about and design undergraduate educational programs. The evidence also suggests these myths may impede the improvement of teaching and learning in our colleges and universities....

After taking into account the characteristics, abilities, and backgrounds students bring with them to college, we found that how much students grow or change has only inconsistent and, perhaps in a practical sense, trivial relationships with such traditional measures of institutional "quality" as educational expenditures per student, student/faculty ratios, faculty salaries, percentage of faculty with the highest degree in their field, faculty research productivity, size of the library, admissions selectivity, or prestige rankings. Even when taking into account several methodological considerations that might partially explain this finding, the evidence is still persuasive: similarities across kinds of colleges substantially outnumber and outweigh their differences in terms of their effects on student learning and other educational outcomes....

The evidence we reviewed strongly suggests that real quality in undergraduate education resides more in an institution's educational climate and in what it does programmatically than in its stock of human, financial, and educational resources. That is not to say that resources are irrelevant, but that to understand educational quality one must look beyond the obvious and easy measures of institutional wealth, resource availability, and advantage. One must look at factors such as

1. the nature and cohesiveness of students' curricular experiences;
2. their course-taking patterns;
3. the quality of teaching they receive and the extent to which faculty members involve students actively in the teaching-learning process;
4. the frequency, purpose, and quality of students' non-classroom interactions with faculty members;
5. the nature of their peer group interactions and extracurricular activities; and
6. the extent to which institutional structures promote cohesive environments that value the life of the mind and high degrees of student academic and social involvement.

What happens to a student after arrival on campus makes a markedly greater difference in what and how much students learn than the prestige, reputations, or resources of the institution.... (*emphasis added*)

The five myths in the article are:

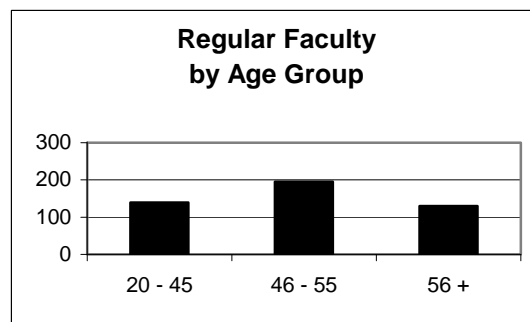
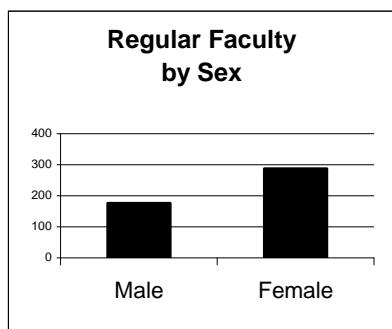
- *Institutional prestige and reputation reflect educational quality*
- *Traditional methods of instruction provide proven, effective ways of teaching undergraduate students*
- *The good teachers are good researchers*

- *Faculty members influence student learning only in the classroom*
- *Students' academic and non-academic experiences are separate and unrelated areas of influence on learning*

Douglas College Employees by Age and Sex

Fall 2006

Group	Total Employees	Sex	Age Group				
		Proportion Female	Average Age	45 and younger	46 - 55	56 and over	
Administrative	62	63%	50	27%	44%	29%	
Continuing Education	97	86%	47	40%	39%	21%	
Contract to Purchase Services							
Training Group	58	59%	46	50%	34%	16%	
Other contracts	94	51%	38	70%	21%	9%	
Subtotal	152	54%		63%	26%	11%	
Faculty							
Contract	304	57%	46	52%	28%	20%	
Regular	464	62%	50	30%	42%	28%	
Subtotal	768	60%		39%	36%	25%	
Staff							
Auxiliary	106	75%	} 36	73%	19%	8%	
Regular	268	78%		} 45	47%	35%	17%
Repeating term	24	88%			63%	20%	17%
Subtotal	398	78%		55%	30%	15%	
Student Assistants	70	57%	24	98%	2%	0%	
TOTAL	1,547	66%		48%	32%	20%	



28 percent of regular faculty are age 56 or older.

Excerpts from “Working in the Middle”

Excerpts from the first three chapters of:

Grubb, W. Norton. (1996) Working in the Middle: Strengthening Education and Training for the Mid-Skilled Labor Force. San Francisco: Jossey Bass.

- 2 The sub-baccalaureate labor market as I define it - *those individuals who have at least a high school diploma but not a baccalaureate degree, individuals who may or may not have some college education* - includes about three-fifths of all workers.
- 7 Despite the size and growth of the sub-baccalaureate labor market, there has been a surprising lack of attention to it. While the benefits of college-going - almost always defined as attaining a baccalaureate degree - are well known, information about the effects of sub-baccalaureate education has been sparse.

The Mid-Skilled Labor Market

- xv These mid-skilled occupations fall intermediate between the unskilled labor market, where education makes little difference, and the baccalaureate-level labor market, where formal schooling makes all the difference. This is a segment of the labor market where formal schooling and training *can* make a substantial difference to employment options and earnings, although it often does not.
- 11 The sub-baccalaureate labor market is almost entirely local.
- 13 Employment policies are rarely written down, and hiring procedures are quite casual.
- 14 Hiring in the sub-baccalaureate labor market is strongly cyclical, and employment is intermittent. Incentives for individuals to invest substantially in skills over long periods of time are weaker.
- 15 Dominated by smaller firms. The path upward requires one to move to larger firms.
- 16 The employers who dominate hiring in the sub-baccalaureate labor market are relatively uninformed about the supply of educated labor. There is a widespread sense among employers that the job-related education and training system is chaotic and fragmented.
- 17 In practice, small size thwarts the development of the information that is necessary for markets to operate efficiently. Each participant is relatively uninformed about the others because the small size of the institutions makes it difficult to accumulate information.

Long-Term Changes in Organization and Occupations

- 17 The dominant change in the organization of work has been the trend toward flatter hierarchies with fewer supervisory layers; as a consequence, individuals must perform a wider variety of tasks.

- 18 As a result, older occupational divisions are no longer clear.
- 19 For jobs whose boundaries are expanding, postsecondary vocational programs are often too narrowly defined, since they provide only a subset of the skills required

The Skills Employers Want

- 21 Most of the competencies required by employers in the sub-baccalaureate labor market cannot readily be taught in schools and colleges.
- 22 When employers mentioned sending employees back to school, they did so to have them learn the particular computer systems or production technologies required on that specific job, not for general education.
- 23 Employers that we interviewed complained constantly about the lack of basic skills among their sub-baccalaureate employees.
- 28 One particular contradiction arises time and again. On the one hand, employers value highly job-specific skills, but also complain about the lack of general and “academic” capacities.
- 29 The skills necessary for entry-level employment are much more specific than those required for promotion and positions of increasing responsibility. Skills necessary in the *short* run may obscure the skills necessary for promotion and mobility in the *long* run. Students from occupational programs are left in the worst of both worlds: lacking the specific skills necessary for entry-level jobs and also without the more general competencies necessary for promotion over the longer run. One striking conclusion: how unimportant the kinds of capacities usually learned in formal schooling are.
- 30 The role of formal schooling in hiring standards are relatively weak.

Hiring Standard: The Roles of Experience and Education

- 30 The need for competencies that are not well taught in educational institutions means that virtually all employers in the sub-baccalaureate labor market look for experience when hiring, particularly experience in virtually the same kind of procedure or production facility. Much more than formal schooling, experience is an indicator of the presence of skills that employers value.
- 34 One important exception to the general pattern of requiring experience over formal schooling appeared in technical fields.

Preferences for Community College Education

- 36 It is clear that experience is the basic requirement and community college education an additional benefit, rather than the other way around.

- 37 Because employers give some preference to applicants with community college credentials, such individuals can often make their way into mid-skilled positions by working their way up from relatively unskilled positions. Their postsecondary education may make them more productive on the job, which will earn them promotion over time. But their postsecondary education will not itself move them higher up the salary scale.

Licensing and “Organized” Occupations

- 39 The existence of licensing provisions specifying the educational requirements for particular health occupations creates a clear relationship between schooling and employment. The contrast is striking between these *organized* occupations, in which required skills have been carefully codified by committees and markets for other occupations where required skills vary substantially and are not codified at all.

Promotion Practices and Advancement

- 42 Positions above entry level jobs are filled through internal promotion. Almost universally, internal promotion is based on job performance.
- 43 The dominance of internal promotion and of promotion based on job performance means that the capacities employers cite as necessary on the job - motivation, cooperation, initiative, adaptability, communications skills, the ability to learn new tasks, and other foundation skills - are crucial for long-term success. Employers consistently cite these capacities as more important than job-specific skills.
- 44 Mobility among companies is difficult because of the tendency for all companies to hire from their existing pool of employees. Consequently, opportunities for upward mobility and growth in earnings depend crucially on how an individual gains entry into the sub-baccalaureate labor market.

Conclusions: Navigating in the Sub-Baccalaureate Labor Market

- 45 Difficult to see what kinds of careers are available. The conventional notion of a “career” - which we may define by a clear progression of jobs, from a modestly skilled entry-level position to those of greater skill, responsibility, and earnings - has been replaced (if it ever existed) with careers that individuals have to shape for themselves, that they must construct by moving among positions and among employers. All in all, the characteristics of the sub-baccalaureate labor market make it more difficult to know how to prepare for entry into many of these occupations, how to find initial employment, or what avenues of upward mobility are likely to materialize. These characteristics also help explain why the economic returns from sub-baccalaureate education are so uneven.
- 46 But formal schooling is only one of several factors that influence hiring, and individuals without experience, or without the personal characteristics that employers are searching

for, find it difficult to compensate with formal schooling alone. Thus to find individuals employment in the field of their education, placement efforts are crucial to the economic benefits of community colleges.

Educational Pathways into the Mid-Skilled Labor Market

Students in Community Colleges: The Challenges of “Getting into the World”

- 68 The most striking aspect of students in community colleges is that they come for an amazing variety of reasons. But the majority of students, at least three-quarters were in the community college for essentially vocational purposes. These students recognize that some kind of postsecondary education is necessary, even if they aren't sure why. Overwhelmingly, they cited low cost and convenience, meaning proximity to home, as reasons for choosing a two-year college. In addition, these younger students often acknowledge their lack of direction as the reason for choosing a low-cost institution.
- 69 The vast majority of older students were interviewed were individuals who had spent enough time in a series of low-paid, low-status, or dead-end jobs and were looking for *another* career, rather than upgrading their position in their current occupation.
- 71 The decision to go to a community college is typically based on casual recommendations.
- 72 But the majority of students by far were using their initial enrollment to find out what they might do, taking courses as a way of trying out different careers, seeing what the academic requirements are like, and assessing their own strengths and weaknesses.
- 74 A large number of the individuals hoping to find a career are enrolled in the “general education” or transfer program, probably because in the absence of any clear direction on their part, the transfer program is at least a well-established route to a future (the baccalaureate degree) whose value is substantial. Although these students say they are in the transfer program, they are still very much experimenters.
- 78 The deeper problem is that the process of counseling and guidance is inherently limited. More active forms of considering career alternatives, particularly the work -based programs may be more effective.
- 79 A second conclusion is that many students entering community college do not know what they want to do. They use the college to figure that out, by taking a roster of courses in the hopes of finding something they like to do. The assertion that most of them are well-informed - that they are there for job upgrading, or to pursue specific careers - or the equivalent assumption on the part of policy makers that voucher like mechanisms are appropriate because students are well informed is simply wrong.

The Implications for Institutions and Policy

- 82 Our interviews also reveal that community colleges are vocational institutions - not necessarily in the specific sense that all students think of themselves as occupational students (although about 60 percent of them do), but in the deeper sense that most students are there to find their way into the labor market. The statements that surveys collect from individuals about their educational goals cannot be trusted; for students unsure of their futures and unaware of their options, these statements are uninformed guesses rather than concrete plans. Course taking provides information about *schooling*, not about *occupational futures*. One implication for community colleges, then, is that they need to take their broadly defined occupational purposes more seriously than some of them do.
- 84 The motives of students are crucial to all these findings, and anything educational institutions can do to help students attain direction for themselves will help the preparation of the sub-baccalaureate labor force.

The Effects of Finding Related Employment

- 96 In the case of vocational and professional programs, the economic benefits of postsecondary education may depend on whether an individual finds employment related to his or her education.
- 97 For individuals with baccalaureate degrees, roughly 60 percent of individuals in occupational areas have related employment. The extent of relatedness among individuals with certificates hovers around 55 percent. Overall, individuals with credentials have higher rates of related employment than do those with small amounts of college, and so part of the higher economic benefits of completing coherent programs is due to the advantage provided by finding employment related to one's field of study.
- 98 These results imply that completing coursework is necessary but not sufficient: placement in a related occupation is absolutely crucial to realizing the potential benefits of occupational education.
- 100 I conclude that the best course for a student is to complete an occupational credential and find related employment. An academic degree is second-best, both at the baccalaureate level and the associate level, where the returns to academic associate degree are substantial but less than those to related occupational credentials. The least beneficial course is to complete an occupational degree but then fail to find related employment. In part, this finding helps explain the variation in returns to different fields of study, since some fields - business and health occupations, for example - have higher rates of related employment than do others.

Conclusions and Policy Implications

- 105 First and foremost, it is clear that the critics of community colleges and other two-year institutions who claim that they provide no economic benefits are incorrect. Some fields of study, especially business and health occupations for women and business and technical subjects for men, have especially high returns; and individuals in jobs related to their fields of study while in college enjoy especially high benefits. However, it is equally clear that some kinds of postsecondary education provide no economic advantage at all. Low-earning fields, and many academic fields, have low or uncertain returns, and those who have failed to find related employment often do not benefit from their postsecondary education. It is unclear that prospective students, facing an array of postsecondary education options, have sufficient knowledge to make rational decisions.

Top 10 Reasons Students Struggle and Drop Out Freshman Year— and What You Can Do About It

August 2007

By Carol Carter

*You may already know of Carol Carter, if your freshmen are among the 200,000 students who use her book *Keys to Success* (Prentice Hall) in their First Year Experience class. We invited her to describe the top retention challenges and offer some suggestions on how to help students succeed.—C.S.*

For the last 15 years, I have worked with college professors on the freshman First Year Experience course. Six years ago, I was dismayed by the growing numbers of students who needed remediation and/or were just generally unprepared for college. The problem was clear: There is not enough academic, emotional, or social preparation from middle school and high school to do college-level work and, later, to succeed in the world of work. My company, [LifeBound](#), was founded to address this problem. I have observed 10 challenges that many students face, and I have some thoughts on how we can help students succeed in college.

1. College students are unprepared to do college-level work.

Many students start college without the basic habits they need to succeed at the college level. Many have not read their high school texts and often avoid buying college books. Others have had years of grade inflation, diluted content, and very little homework. Even those students who have gone through college prep programs are not immune. *Rigor at Risk: Reaffirming Quality in the School Core Curriculum*, released in May by the ACT, dispels the assumption that simply completing a recommended core college preparatory curriculum prepares students for success. The passion to learn has not been established.

Solution: In addition to remediation in math and English, students need to take basic study skills and freshman experience courses the summer before they start college and the first semester of college. Without this basic exposure to learning and studying, students spin their wheels needlessly in their first year of college.

2. Students lack self-awareness.

In his book *Ready or Not, Here Comes Life*, Dr. Mel Levine describes “takers of the wrong road”—students who make career decisions based on very little information about themselves and what selected fields require. If students don’t know themselves—their strengths and weaknesses and how they learn—they are likely to be unhappy in the field they pursue. The students who know themselves are the ones who are resilient and creative because they are working from a foundation of strength while they tackle their weaknesses.

Solution: Require one internship, if not two, of your graduates. Companies today expect that students have had at least two internships during college. In addition to valuable exposure to workplace realities, internships help students discover what they do and don’t like. Without this information, they can’t make good decisions about how their studies will help them once they enter the world of work full time.

3. Technology has allowed students to isolate socially.

Technology has many benefits, but many students “hide” behind technology to avoid human contact. Students in college need to learn to take risks, to talk to people who are different from them, to speak with professors who intimidate them, and to use resources that can help them. Many of the best students suffer from “lone ranger” tendencies, and they will be hampered if they do not learn the basics of self-advocacy. Learning who is there to help on campus and taking the initiative to go get the help are two important steps freshmen need to take.

Solution: Resource Find is an activity designed to get students to find the resources they may need. Think about requiring this as a part of orientation; students visit each resource center on campus, ask one question, and get a stamp in their Campus Passport. This strategy is best if the students are organized in groups of three or four and can use the opportunity to meet each other. Student ambassadors can be stationed at each resource center to greet the students so that incoming freshmen can immediately feel at ease seeking help. Older students at each station can share their experiences accessing the benefits of that particular resource.

4. Students lack healthy boundaries.

Poor judgment plagues many freshmen, mostly because they haven’t had a lot of life experience to temper their instincts. Temptations to party every night, sleep through morning lectures, and avoid out-of-class studying by playing computer games or watching TV are among the top distractions. While these things aren’t bad in isolation, they are harmful when done out of proportion. Students need to understand appropriate balance and the specific ways to set healthy boundaries to maintain focus and discipline.

Solution: Parent awareness. While some schools have programs for parents, few of them are direct enough about the ways parents protect their kids from making adult choices. How can students learn from setbacks when parents are always there to coddle them after their first D or when they're not selected to play on a sports team? Colleges need to give parents direct information on boundaries so that they can model this to their children and cut the apron strings. These sessions need to be established during the spring tour season and reinforced during registration for optimal benefit to parents, faculty, and students. (I've written more about this in *Stop Parenting & Start Coaching*.)

5. Few or no role models are available.

Many students don't have people they know, admire, and respect who are one or two years older than they are. Seeing students who have struggled, persevered, and overcome obstacles to reach their goals gives new students a sense of what is possible. Whether it is overcoming a learning disability, dealing with a physical handicap, or mastering discipline over partying too much, students who can serve as role models represent the indomitable spirit each student needs to succeed. This is as important for first-generation students of immigrants as it is for those who come from affluent suburbs.

Solution: Peer mentors. Many schools involve students as tutors and mentors. The more that students have a one-on-one connection with an older student leader, the more connected they will be to campus life. Everyone grows in this situation. The peer leader learns valuable skills in patience, teaching, and guidance that will open many doors for them once they reach the professional world. Formal training in coaching skills, expectations, and leadership is needed to make the most out of the peer's abilities.

6. Students are stressed.

Students today are stressed out. Some of the stress comes from not knowing what they want to do with their lives. Some comes from parental pressures. Some comes from a lack of emotional intelligence—knowing how to calm yourself down, look at choices and outcomes, and develop a step-by-step plan. Stress also comes from peer pressure and from navigating the daunting college application process.

Solution: Meet students where they are. College needs to be a balance of academics, social learning, and personal growth. Develop programs in the residence life halls, the Greek system, and student government, where students can meet each other and develop some common interests. Emphasize health and wellness. Provide sports groups that students can join no matter what their athletic ability may be. Other alternatives include activities like tai chi or chi gong. Provide social gatherings at the health services center so that they know where it is and what is offered (e.g., start the fun run there or have intramural tryouts there). Invite the staff to give guest lectures during student success and psychology courses. Provide several places of community around campus that offer alternatives to the extreme drinking/partying culture. Part of the reason why students congregate at the parties is because there aren't a lot of enticing alternatives. That needs to change.

7. There is a lack of on-campus connections.

Retention data shows that students who join one or more activities are far more likely to stay in school than students who don't. This is especially true for students who live off campus and have no compelling reason to stay around after class. Students learn a great deal when they join organizations or fully participate by running for office or being a committee member. Employers want to know that students have made a difference outside of their studies and their part-time jobs. When students join something they are interested in, they meet friends, they enjoy themselves, and they have a safe environment in which to grow.

Solution: Consider requiring freshmen to join at least one organization or “experience.” As compelling as the data is, why would we not be more stringent about emphasizing this? Join something, anything. If no club is of interest, encourage students to recruit a faculty advisor and three other students to start their own. Schools like the University of Colorado at Boulder recruit freshmen for an Outward Bound class before classes start. Students form a group and become friends from the beginning and are much more comfortable asserting themselves with the emotional risk it takes to branch out and meet more new people once school starts.

8. There are insufficient funds.

For many, the financial burden of college is too overwhelming and many dropouts cite lack of money as the number-one reason why they left school, according to the ACT. With the doubling of tuition and the tripling of loan debt, students are also strapped by credit card and car loan debt and other expenses. Even if they graduate with a good job, many are looking at years to pay off the debt.

Solution: Expand the role of financial aid advisor to financial advisor and coach. Many students need help breaking down their spending patterns—which they control—and isolating their fixed costs, such as the amount of college debt they are incurring. Strategy and planning are key. They need help from a strategist and a planner so that they can master these basic skills going forward. This is another key topic to cover with parents in the spring that can be reinforced during registration.

9. There is a disconnect between staff and faculty.

Today's students speak digital as a first language. They are often in a hurry, multitasking, and indirect. Contrast this with the styles and personalities of most of the faculty on your campus who are digital immigrants. How can this bridge be built? Through good, old-fashioned personal contact.

Solution: Many schools are putting faculty, advisors, and tutors through coaching classes to help them understand emotional intelligence—how to connect with students beyond the subject matter. If students come in to get help understanding quadratic equations from a teacher or tutor, but they don't feel motivated to come back next week and the week after that, they are missing the chance to develop valuable discipline. Teachers and tutors can keep them accountable with interest, motivation, and drive.

10. High school grads aren't ready for college.

Does this sound repetitive from point 1 above? It is! America's high schools can learn lessons from the successes around the world. We are now in a full-on global competition for talent, with many smart and motivated people from countries such as China, India, Thailand, and the Philippines. While many of the best grads from your college used to move to New York, DC, Chicago, or San Francisco for top jobs, in today's world, the best students need to be ready to work and live in Dubai, Delhi, or Dhaka. What is your college doing to prepare them for that reality?

Solution: If your college doesn't have a strong outreach plan in the high school districts that surround you, create one fast. This is your pipeline of students. You can influence it with standards and programs that will produce more aware, more prepared, and more motivated college freshmen on your campus. So don't just think about how you can recruit these students, think, How can we prepare them to succeed as freshmen, graduate as seniors, and go on to get the best jobs available in the global economy? We have no time to lose.

Carol J. Carter has authored more than 20 books on college and career success and speaks nationally and internationally at conferences and on campuses. She can be reached at caroljcarter@lifebound.com or through her website <http://www.lifebound.com/>.