

## Who Is Not Attending Post-Secondary Education and Why?

### Overview

The objective of this question scan was to examine why some qualified individuals are not pursuing postsecondary education. Searches applying a broad range of applicable terms to four major databases initially yielded 349 relevant documents. Subsequent examination of article abstracts reduced this number to 163. A search of government and professional/sectoral organisation websites yielded an additional 18 articles.

Articles that specifically address barriers to postsecondary access such as: exclusion on the basis of ethnicity; gender; or socio-economic status (SES), were excluded in this scan. These variables are addressed in the Question Scan Report: *How Does Gender, Ethnicity and Socio-Economic Status Impede Access to Post-Secondary Education, and What Options Exist for Overcoming Impediments to Access*. We recommend that report be reviewed with this one as lower SES emerged as a strong influence on qualified persons' non-pursuit of postsecondary education and interacts with many of the predictor variables researched in the literature scanned here.

Different articles from Canada and the U.S.A estimate that between that 38-50% of youth in North America do not go on to postsecondary education directly after high school (although they may do so later in life). Some articles also suggests that the decision to attend postsecondary is often made before beginning high school, e.g. Grayson (1999) *Research in Focus: Who Goes to University and Why?* Groups that more commonly do not attend postsecondary education seem to include rural students, students with physical or learning disabilities, 'at-risk' students, and those whose families and/or communities do not promote education. Frequently appearing reasons for non-attendance include: inability to relocate; preference for workforce entry for family or financial reasons; and, a lack of interest, motivation, or self-efficacy towards higher education.

### Observations

**Quantitative: 101 articles-** Included under this heading is any scholarly literature that marshals statistical evidence to make its case. These articles include experimental, quasi-experimental, and large-scale descriptive studies. The latter form dominates the quantitative literature and includes surveys, questionnaires, analysis of postsecondary application and enrolment statistics, and longitudinal studies tracking the pathways of cohorts 1-10 years after high school graduation. Specific reasons for non-attendance, and predictor variables explaining non-attendance/persistence in post-secondary education appear to include: parental influence; rurality/proximity to institutions; and, learning, physical, or behavioural disability.

Nine articles (in addition to three qualitative articles) examine postsecondary attendance behaviour and influences in rural areas. In a study of B.C. and Nova Scotia youth *Rurality and Capital: Educational Expectations and Attainments of Rural, Urban/Rural, and Metropolitan Youth*, Andres and Looker (2001) find "that the young people living in rural areas had lower educational expectations and attainments than those living outside rural areas, even when controlling for gender, parental education, and academic stream,

and that the effects of rurality persisted over time.” Other studies report similar findings and suggest that many rural students prefer to enter full-time employment after high school. Commuting distance, inability to relocate for financial or other reasons, and lack of information about postsecondary options appear to be contributing factors to non-attendance.

Despite our desire to examine non-socio-economic predictors of postsecondary participation, key components and correlates of SES, such as parents’ educational attainments and attitudes and behaviours towards their children’s educations, persistently interact with other variables to influence children’s educational aspirations in several studies. Further, in *Children from Disrupted Families as Adults: Family Structure, College Attendance and College Completion*, Ver Plog (2003) finds that the lower attendance rates evident in students from single parent and step-families also largely owe to “family income differences.”

Many studies examine the postsecondary participation rates of students facing academic challenges. Two studies find that students who repeat a K12 grade have significantly lower odds of attending postsecondary education. In *Occupational and Educational Aspirations and Attainment of Young Adults With and Without LD 2 Years After High School Completion*, Rojewski (1999) finds students categorized ‘learning disabled’ “reported lower graduation rates....and were more likely to be employed and less likely to be enrolled in some type of postsecondary education program than their non-disabled peers.” Similar results obtain in studies of physically and behaviourally disabled students. In *Determinants of Postsecondary Participation*, Butlin (1999) suggests high school academic success, especially in English and Math, significantly reduces effects of family background and disability on university non-attendance. Butlin’s article appears especially useful in illustrating the predictors of different types of postsecondary participation (i.e., university, college, or vocational attendance vs. non-attendance in each.)

Other trends in the literature are:

- Income expectations and labour market conditions have an impact on postsecondary enrolment, e.g. Bosworth and Ford (1985) *Income Expectations and the Decision to Enter Higher Education*;
- Cost of university and a lack of financial aid are significant deterrents to pursuing postsecondary education, e.g. Mazumder (2003) *Family Resources and College Enrolment*;
- Lack of high school academic success and/or lack of clear career goals are common reasons for postsecondary non-attendance. Students’ peers also have a strong influence, e.g. Bruckner, Barnes, Schulte, (2004) *School's Out: Voices From Graduating Seniors Who Choose Not to Immediately Pursue Additional Education*;
- Increased levels of information and guidance regarding postsecondary education and the post-high school employment market increase chances of enrolling, e.g. Plank and Jordan (2001) *Effects of Information, Guidance, and Actions on Postsecondary Destinations: A Study of Talent Loss*;

- Substance use, working during high school, and community violence are all negatively related to post-secondary attendance, e.g. Grogger (1997) *Local Violence and Educational Attainment*.

**Qualitative: 10 articles-** Included under this heading are interviews, ethnographic studies, reviews of programs aimed at supporting youth with special needs, and descriptive case studies. The qualitative literature examines different influences on the decision not to attend postsecondary education.

In two studies, including Healy and Jellema's (1991) *Financial Aid Effect on the Matriculation Decision*, certain types of financial aid, especially grants, appear to increase enrolment in a public university and a private liberal arts college. Students' perceptions of the 'real world' and labour market prospects, and their relative valuing of work and education influence enrolment decisions, as do "contextual (social and familial) factors that [do]not encourage further education" (Davey, 2002). Further differences are indicated in influences on rural vs. urban students' college attendance decisions.

Two studies examine programs designed to help prepare secondary students for post-secondary education. One, Hart, Mele-McCarthy and Pasternack's (2004) *Community College: A Pathway to Success for Youth with Learning, Cognitive, and Intellectual Disabilities in Secondary Settings* focuses on inclusive postsecondary programs and services for secondary students with learning, cognitive, and intellectual disabilities. Both articles recommend increased collaboration and connectivity between high-school and colleges and increased student support and information.

The qualitative literature suggests three factors that may increase desire to attend post-secondary education: 1) more support, in the form of grants and special programs for challenged students; 2) more information about and collaboration with postsecondary institutions; and 3) a culture more appreciative of education's value and opportunities.

**Editorials: 10 articles-** These are position or opinion papers advocating for certain principles or practices in two main areas: response to economic and social trends; and, assistance to special groups of students in entering and remaining in postsecondary education. Trends in postsecondary education include changing enrolment patterns, increasing numbers of postsecondary institutions, and the effects of economic trends on enrolment, including those of tuition increases on students. Special groups of students include the increasing numbers of 'at-risk,' 'non-traditional' and part time students enrolling in postsecondary schooling. Editorials stress the necessity for secondary and postsecondary institutions to respond to these new students by understanding their needs, marketing strategically, and increasing relevant support programs to reduce attrition.

**Reviews: 3 Articles-** Included under this heading are articles that review literature on topics related to post-secondary attendance and provide recommendations for further research. Stern and Briggs' (1999) California study, *Competition or Complementarity between Work and School: Some Insights from High School Students*, indicates students' valuing of work over education equals the influence of their parents' education levels on

their postsecondary choices. The other two reviews examine studies of factors that influence children's educational aspirations, and studies of outcomes for youth with learning disabilities. These reviews offer recommendations which may inform the topic of facilitating postsecondary attendance, but which are not specific to it.

**Reports: 39 articles-** These are reports produced by specific postsecondary institutions or government agencies documenting the information available on students who do not enrol or who drop-out of postsecondary schooling. Findings of different reports suggest that approximately one third to half of students are not attending postsecondary school, and approximately one-half of these cite financial reasons for non-attendance. Other relevant findings include:

- Students 35 and older are becoming a significant portion of postsecondary enrollees, and financial aid is a strong enrolment incentive to this population, e.g. Kominski (1987) *School Enrollment--Social and Economic Characteristics of Students: October 1983. Current Population Reports: Population Characteristics*;
- There is an increase in students from lower SES, and a decrease in students from middle SES backgrounds enrolling in post-secondary education. In *Fewer Students from Middle Class Enrolling in College*, Grassmuck (1990) suggests that this may be “a result of increasing costs of college attendance and of fewer numbers of families in the middle-income group;”
- Those who delay entry into postsecondary education are less likely to complete a bachelor's degree, e.g. Tuma *et. al.* (1995) *Educational Attainment of 1980 High School Sophomores by 1992. 1992 Descriptive Summary of 1980 High School Sophomores 12 Years Later. High School and Beyond. Statistical Analysis Report*;
- Students in secondary vocational training are less likely to enrol in postsecondary education, e.g. Meier (1991) *Participation in Secondary Vocational Education and Its Relationship to College Enrollment and Major*;
- “Rigorous high school courses, high expectations of all students, and availability of college counselling and information” influence low-SES students to attend college according to King (1996) in *The Decision To Go to College: Attitudes and Experiences Associated with College Attendance Among Low-Income Students*.

**Grey Literature: 18 documents-** Grey literature may subsume any of the above four genres. Most are studies or reports, are highly relevant to the topic, and are published on the internet by the Canadian federal government, provincial governments and large educational associations such as the Council of Ontario Universities. The Millennium Scholarship Foundation also published four articles of particular relevance:

- Looker's (2005) *Why Don't They Go On? Factors Affecting the Decisions of Canadian Youth Not to Pursue Post-Secondary Education* which reviews much of the literature presented here and presents policy recommendations to the Canadian federal government;
- Brunson, Butt, and Diesel's (2005) *Deciding about Post-Secondary Education: Hearing the Voices of Non-Attendees*, which draws on qualitative interviews with 62 non-attendees to highlight barriers and reasons for non-attendance;

- Junor and Usher's (2004) *The Price Of Knowledge: Access and Student Finance in Canada*, which draws on data from many publications to summarize Canadian student pathways after high school, family, financial and other influences on post-secondary attendance;
- Foley's (2001) *Why Stop after High School?: A Descriptive Analysis of the Most Important Reasons that High School Graduates Do Not Continue to PSE* which highlights some of the non-finance related reasons that students do not continue their education, and supports the finding, above, that a direct transition from high-school to postsecondary improves chances of obtaining a degree.

The remainder of the grey literature examines application statistics to universities, and tracks cohorts of high school students after graduation or provides socio-demographic analyses of postsecondary attendance. Three articles specifically report on the effects of distance to school, lack of financial aid, and parents' education level on non-attendance.

## Summary

This body of literature recommends the following policy initiatives:

- Facilitating access to and information about postsecondary education for rural students through active outreach and marketing, online education, local campuses, and housing subsidies;
- Encouraging direct transition from high school to postsecondary education, and increasing collaboration between secondary and postsecondary institutions;
- Marketing to non-traditional students and adapting postsecondary programs to their needs, perhaps by offering aid incentives, part-time programs, on-campus and/or subsidized child care, and relevant social activities;
- Teaching the value of postsecondary education in elementary/middle schools;
- Increasing K-12 school counselling resources and special programs to provide more assistance to students who are struggling academically, challenged by disabilities, undecided about career goals or uninformed about their postsecondary options;
- Actively promoting a culture of lifelong learning and providing concrete information about the value of higher education to elementary and secondary students and the public at large.

## Feasibility

There appears to be enough relevant literature here, combined with the findings from Question Scan Report: *How Does Gender, Ethnicity and Socio-Economic Status Impede Access to Post-Secondary Education, and What Options Exist for Overcoming Impediments to Access*, to formulate informed policy responses without resort to a full, systematic review of the literature.

## Appendix A: Included References

### References: Canada

Enrolment trends.(2001). *University Affairs*, 42(8), 38.

Applications up but enrolment down [in Ontario universities].(1993). *Forum - Ontario Confederation of University Faculty Associations*, 8(5), 1.

Enrolment restrictions only limit on continuing growth.(1990). *University Affairs*, 31(9), 14.

Acumen Research. (2005). *The 2004 Ontario college applicant survey*. Retrieved October 5, 2005 from <http://www.millenniumscholarships.ca/images/Publications/2004-Ontario-college-applicant-survey-en.pdf>

Alberta Learning. (2005). *Post secondary transitions in Alberta: The educational outcomes of 1998/1999 grade 12 students*. Retrieved October 6, 2005 from [http://www.advancededucation.gov.ab.ca/ei/publications/acad\\_report\\_final1999.pdf](http://www.advancededucation.gov.ab.ca/ei/publications/acad_report_final1999.pdf)  
The document analyses and reports on the transition of grade 12 students entering Alberta post-secondary institutions.

Alberta Learning. (2005). *Post-secondary transitions in Alberta: Educational outcomes of 1999/2000 grade 12 students*. Retrieved October 6, 2005 from [http://www.advancededucation.gov.ab.ca/ei/publications/acad\\_report\\_final2000.pdf](http://www.advancededucation.gov.ab.ca/ei/publications/acad_report_final2000.pdf)  
The document analyses and reports on the transition of grade 12 students entering Alberta post-secondary institutions.

Andres, L. (2005). *Educational and occupational participation and completion patterns of the class of '88*. Retrieved October 6, 2005 from <http://www.bccat.bc.ca/pubs/andres2002.pdf>  
Part of an extensive longitudinal study, this research report describes the post-secondary educational participation (within and without British Columbia) and occupational patterns of the B.C. Grade 12 graduating class of 1988 ten years later. It details; post-secondary institutions attended; credentials earned; aspirations and expectations; relationship between high school credentials and post-secondary completion status; post-secondary financing; employment and earnings; providing a gender breakdown for each topic.

Andres, L., & Carpenter, S. (2005). *Today's higher education students: Issues of admission, retention, transfer, and attrition in relation to changing student demographics*. Retrieved October 6, 2005 from <http://www.bccat.bc.ca/pubs/today.pdf>  
This paper discusses attrition, various models of student retention and the changing

patterns of student participation in higher education. There is extensive discussion of the increased numbers of non-traditional learners and their impact on policies related to admission, transfer, retention, and attrition.

Andres, L., & Looker, E. D. (2001). Rurality and capital: Educational expectations and attainments of rural, urban/rural, and metropolitan youth. *Canadian Journal of Higher Education*, 31(2), 1-45.

A study examined the educational expectations and attainments of metropolitan, rural, and urban/rural youth. The participants were young people in their late teens from metropolitan, rural, and urban/rural communities in British Columbia and Nova Scotia in Canada. It was found that the young people living in rural areas had lower educational expectations and attainments than those living outside rural areas, even when controlling for gender, parental education, and academic stream, and that the effects of rurality persisted over time. It was also found that rural youth in British Columbia were more likely than their counterparts in Nova Scotia to pursue postsecondary education but that rural youth in Nova Scotia were more likely to have successfully completed a degree program four to five years after high school graduation. The results are discussed, and the implications of the findings for future research and for educational policy in British Columbia and Nova Scotia are provided.

Apling, R. N. (1991). *Postsecondary educational experiences of high school graduates. CRS report for congress* No. CRS91374EPW). U.S.; District of Columbia:

The report summarizes data on the postsecondary educational experiences of 1980 high school graduates based on three major longitudinal data sets: the National Longitudinal Survey of the 1972 high school class; the High School and Beyond study of 1980 high school seniors; and the High School and Beyond study of 1980 high school sophomores. Findings include the following: (1) about one-third of the graduates of the high school class of 1980 had not enrolled in postsecondary education by 1986; (2) more than half of those high school graduates who began full time at four-year institutions in the fall of 1980 continued as full-time students for four years, while the others either dropped out of postsecondary education or followed an alternative path, such as part-time enrollment or temporarily leaving and then returning to school; (3) more than 80% of 1980 high school graduates who followed an alternative path into postsecondary education enrolled at a community college or other less-than-baccalaureate level institution; (4) 1980 high school graduates who began and continued full-time at four-year institutions earned about 60% of the baccalaureate degrees awarded to 1980 high school graduates by 1986; (5) Black and Hispanic students and students from lower socioeconomic backgrounds who began and continued full-time at four-year institutions were less likely than white students and those from more prosperous backgrounds to have earned a Bachelor's degree by 1986.

Brunson, L., Butt, K. & Deziel, Y. (2005). *Deciding about post-secondary education: Hearing the voices of non-attendeeds*. Retrieved October 6, 2005 from [http://www.millenniumscholarships.ca/images/Publications/cogem\\_en.pdf](http://www.millenniumscholarships.ca/images/Publications/cogem_en.pdf)

Buckley, P. G., & And Others. (1996). Educational choices of adult learners. *Journal of Marketing for Higher Education*, 7(3), 1-14.

A survey of 194 adult community college students and potential students in Ontario (Canada) investigated factors in education decision-making, for purposes of student recruitment. It was found that the Latent Variable Partial Least Squares model of analysis highlights best the important factors.

Butlin, & George. (1999). Determinants of postsecondary participation. *Education Quarterly Review*, 5(3), 9.

This logistic regression model is called multinomial, because multiple comparisons are made between different types of participation (university versus no postsecondary participation, community college(f.8) versus no postsecondary participation, and trade-vocational(f.9) versus no postsecondary participation) rather than simply looking at postsecondary participation versus no participation.(f.10) Combining different types of postsecondary education into a single participation variable could lead to misleading results, because, as will be shown below, the effect of many of the predictors on participation depend upon the type of postsecondary comparison being made.(f.11) It is important to bear in mind that the contrast group for all types of postsecondary participation is always the group who did not participate in any type of postsecondary education, as listed above. One of the major findings of this study is that the effect of predictor variables on the odds of participating in postsecondary education is highly dependent on the type of postsecondary education examined (i.e., university, community college, trade-vocational). For example, high school graduates who failed high school math had lower odds of attending university (controlling for other factors) versus not participating in postsecondary education, however the odds were not reduced for participation in community college or trade-vocational education. The same pattern applied for high average grades in high school, but failing a grade in elementary school lowered the odds of all types of postsecondary participation versus no participation. The contextual nature of the impact of specific predictors may be important for education policy and planning purposes. It is recommended that future studies of postsecondary participation exercise caution about using a dichotomous participation versus no participation in postsecondary education variable, since this can weaken and distort effects specific to a given type of postsecondary education. As discussed earlier, the Canadian research literature dealing with equity of access to postsecondary education has historically stressed the importance of parent's educational attainment, gender and language. This study demonstrated that parent's level of educational attainment has a strong influence on participation in university and community college versus no postsecondary participation, even when controlling for other factors. On the other hand this study also found that high average grades in high school, the absence of difficulties with high school math and English, and not failing a grade in elementary school are also strong predictors of

university participation versus no postsecondary participation, while holding constant parent's level of education, and other predictors. This suggests that academic performance is also a key factor which increases the odds of participating in university education, while holding constant the effects of parents' educational attainment. Women had slightly higher odds of participating in both university and community college, but lower odds for trade-vocational compared to men, controlling for other factors. This is consistent with the trends on participation of women in postsecondary education. High school graduates who used French most often had slightly lower odds, with controls, of attending university, but had higher odds of attending college level and trade-vocational than high school graduates who spoke English most often. In addition to the above factors, it was found that students who attended high school in a rural compared to an urban area had lower odds of attending university versus no postsecondary participation, holding constant other factors.

Cardak, B. A., & McDonald, J. T. (2004). Neighbourhood effects, preference heterogeneity and immigrant educational attainment. *Applied Economics*, 36(6), 559-72.

This paper investigates differences between the educational attainment of immigrants, children of immigrants and native-born individuals in Australia by using Australian Youth Survey (AYS) data combined with aggregate Australian Census data. Differences in educational attainment are decomposed into: (i) typical demographic and socio-economic sources common to all ethnic groups; (ii) unobserved region of residence and region of origin effects; and (iii) neighbourhood effects such as degree and ethnic concentration of particular ethnic groups in different neighbourhoods. A theoretical model incorporating these effects is proposed but structural estimation is not possible for lack of appropriate data. Instead, a reduced form methodology is proposed and employed. The empirical results identify positive ethnic neighbourhood effects in high school completion and university enrolment for some immigrant groups in Australia, in particular first and second generation immigrants from Asia. The results indicate that it is not just the size of the ethnic network but the "quality" of the network that is important.

Christofides, L. N., Cirello, J., & Hoy, M. (2001). Family income and postsecondary education in Canada. *Canadian Journal of Higher Education*, 31(1), 177-2087. Examined how postsecondary education participation rates have evolved over time and how certain variables may affect them. Found that a number of socioeconomic influences affect participation rates. Beyond these, particularly pronounced trend increases in postsecondary education attendance for children from low-income households have led to a convergence in the participation rates of children from different income groups.

Corman, June, Caputo, Tullio, Barr, & Lynn. (1992). Unpacking attrition: A change of emphasis. *The Canadian Journal of Higher Education*, 22(3), 14.

Council of Ontario Universities. (2005). *Application statistics 2003*. Retrieved October 6, 2005 from <http://www.cou.on.ca/bin/publications/onlinePublications.cfm>

This report presents summary statistics on application and registration patterns of applicants (who were processed by the Application Centre), applying for fall entry into full-time study in their first year of post-OAC programs in Ontario Universities.

Council of Ontario Universities. (2005). *Application statistics 2003*. Retrieved October 6, 2005 from <http://www.cou.on.ca/bin/publications/onlinePublications.cfm>

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Council of Ontario Universities. (2005). *Application statistics 2004*. Retrieved October 6, 2005 from <http://www.cou.on.ca/bin/publications/onlinePublications.cfm>

This report presents summary statistics on application and registration patterns of applicants (who were processed by the Application Centre), applying for fall entry into full-time study in their first year at an Ontario University.

Davey, H. (1993). The occupational aspirations and expectations of senior high school students. *Guidance and Counselling*, 8, 16-28.

Fichten, S, C., Barile, Maria, & Asuncion, V, J. (2003). Canadian postsecondary students with disabilities: Where are they? *The Canadian Journal of Higher Education*, 33(3), 71.

To explore the differences further we carried out an additional series of tests to remove a source of confound. Learning disabilities may not be recognized as a disability in francophone CEGEPs. Therefore, we reduced the number of students with disabilities at Anglophone CEGEPs by 1/3, the approximate proportion of students with learning disabilities in most North American postsecondary educational institutions (cf., Horn & Berkold, 1999). Because learning disabilities are not officially recognized for funding in either Anglophone or francophone CEGEPs, this was done only for participant data. The impact of this can be seen in Table 4. This manipulation diminished the discrepancies somewhat. Nevertheless, the data indicate that there continue to be between 3 and 5 times as many students with disabilities in Anglophone than in francophone CEGEPs. The percentages of students with disabilities reflect these findings. So the presence of learning disabilities in Anglophone CEGEPs does not fully account for the discrepancy in the percentage of students with disabilities enrolled in Anglophone and francophone CEGEPs. Linguistic differences. Our results show that there is a substantially and significantly smaller proportion of students with disabilities in Quebec colleges (2/3% vs 5 3/4%) and universities (1/2% vs 2 1/2%) than in comparable institutions in the rest of Canada. Across Canada, smaller proportions of francophone than Anglophone postsecondary students are registered to receive disability related services from their postsecondary institution, although Quebec francophone colleges have a smaller proportion of students with disabilities than francophone colleges outside Quebec (2/3% vs 5%). Similarly, in Quebec, francophone colleges have

substantially smaller percentages of students with disabilities than Anglophone colleges (2/3% vs 1%). Quebec's Anglophone (1 1/2%) universities have larger proportions of students with disabilities than francophone (1/4%) universities. Regardless of language or college or university status, the proportion of students with disabilities in Quebec institutions is substantially lower. Analyses which attempted to unconfound language and province were only partially successful in answering the question, "Is the difference due to language or to differences in provincial policies?" The closest approximation to an answer that we can propose is that most of the difference is due to provincial policies and practices, with a smaller but independent role for language. The low enrollment of students with disabilities in Quebec postsecondary institutions has been lamented by a variety of sources (e.g., Allie & Hebert, 1998; AQEHPS, 1999; OPHQ, 1995). Hypothesis 6. Differences are due to the nature of the disabilities that are officially "recognized" in Quebec and in the other Canadian provinces. Students with learning disabilities, who typically make up about 1/3 of North American institutions' populations of students with disabilities (e.g., Fichten et al., in press; Jackson et al., 2001; Roessler & Kirk, 1998; Scott, 1997), are not recognized as having a disability for funding purposes in Quebec. Among Francophones, in particular, learning disability as a clinical entity is virtually nonexistent (Cardyn & Begin, 1998). Thus, Quebec enrollments, especially in francophone institutions, exclude most of the 1/3 of postsecondary students with disabilities who probably have a learning disability. To evaluate this possibility, in Study 2 we conducted a series of comparisons where we controlled for learning disabilities by subtracting 1/3 of the students with disabilities in Quebec's Anglophone colleges. While this mitigated the differences between Quebec Anglophone and francophone colleges somewhat, the correction by no means eliminated the very large discrepancies. Moreover, in the current investigation participants from Anglophone colleges and universities in Quebec indicated that they had large numbers of students with learning disabilities who received disability related services such as tutoring, extra time for exams, etc. Nevertheless, the difference between Anglophone colleges and universities in Quebec and their counterparts outside Quebec continue to show very substantial differences that are considerably greater than that which can be reasonably accounted for by students with a learning disability. So while this hypothesis has some merit, it fails to completely account for the magnitude of the difference between Quebec and the rest of Canada.

Foley, K. (2005). *Why stop after high school?: A descriptive analysis of the most important reasons that high school graduates do not continue to PSE (2001)*.

Retrieved October 6, 2005 from

[http://www.millenniumscholarships.ca/images/Publications/foley\\_en.pdf](http://www.millenniumscholarships.ca/images/Publications/foley_en.pdf)

This paper uses data from Statistics Canada's *School Leavers Survey* (SLS) and *School Leavers Follow Up Survey* (SLF) to examine the reasons why some high school graduates do not pursue post-secondary education.

Frenette, M. (2004). Access to college and university: Does distance to school matter? *Canadian Public Policy*, 30(4), 427-43.

It is already known that students from lower-income families are less likely to pursue postsecondary studies. This study contributes to our knowledge of postsecondary access by focusing on the role played by the distance separating high-school students from postsecondary institutions, with particular focus on the choice between college and university attendance. Distance to school may act as a deterrent to attending by virtue of relocation costs, especially if the student is from a lower-income family. The study findings support the notion that increased distance to school is associated with an access gap, even above and beyond the gap that has been linked to family income. Specifically, increased distance to university is associated with lower university attendance, and a larger tendency to attend the local college instead. This relationship is found to be much stronger in lower-income families.

Frenette, M. (2002). *Too far to go on: Distance to school and university participation*. Retrieved October 6, 2005 from

<http://www.statcan.ca/english/research/11F0019MIE/11F0019MIE2002191.pdf>

This study found that family income and distance to a university have a substantial affect on participation rates. The report shows that, outside commuting distance, students from high-income families were almost six times more likely to participate in university between 1995 and 1999 than were young people from lower income backgrounds. According to the study, only 3% of students from low-income families living beyond commuting distance participated in university.

The existence of such a gap suggests that high education-related expenses and inadequate student financial aid have pushed university education beyond the reach of low and moderate income people who need to relocate from outlying areas in order to attend university. Overall, one in five Canadians lived beyond commuting distance from a university in 1996. That figure rises to 52% for residents of Saskatchewan and to 42% for Newfoundland and Labrador residents.

Giberson, Mark. (1999). Student overload: Ontario's decision to reform the high school system means that students now in grades 8 and 9 will go head-to-head for university and college seats when they all graduate from high school in 2003. *University Affairs*, 40(4), 14.

Gladieux, L. E., & Scott Swail, W. (2005). *Financial aid is not enough*. Retrieved October 6, 2005 from

<http://www.educationalpolicy.org/pdf/Financial%20Aid%20is%20Not%20Enough.pdf>

Published in the College Board Review in Summer 1998, this publication provides data and analysis asserting that financial aid is an important factor in college access and persistence. However, other factors, including academic preparation, are pivotal to ultimate success at the postsecondary level. This article provides data on who goes to college, who goes where, and who completes, and asks the question "Why haven't we done better?" The authors conclude with a discussion of public policy and the responsibilities of higher education in rectifying the inequities in access. Please click here to read more.

Grayson, J. P., & Grayson, K. (2003). *Research on retention and attrition*. Retrieved October 6, 2005 from [http://www.millenniumscholarships.ca/images/Publications/retention\\_final.pdf](http://www.millenniumscholarships.ca/images/Publications/retention_final.pdf)

Grayson, Paul J. (1999). Research in focus: Who goes to university and why? *Education Canada*, 39(2), 37.

Historically, in English Canada, the few universities that existed were the preserve of middle- and upper-class White Anglo-Celtic Protestant males. Starting in the 1960s, however, the number of Canadian universities increased dramatically as did the number of female, low-income, and immigrant students. By the 1980s the participation of females in the 18 to 21 age group in higher education actually surpassed that of males. Information on the family income of students is harder to obtain but there is no doubt that in many universities, the sons and daughters of the relatively well-off began sharing their classrooms with students of working-class and immigrant origins. A few years ago, students entering the University of Calgary, King's College at the University of Western Ontario, the University of Toronto, Nipissing University, Ryerson Polytechnic University, the University of Guelph, and Brock University all filled out the same questionnaire, in which they were asked various questions on their high school experiences, backgrounds, aspirations, and so on. Although this information cannot be used to typify all Canadian universities, it represents the largest single block of detailed information available on students entering Canadian universities. These institutions will be referred to collectively as the "Group of Seven". Data from these and other universities suggest considerable overall socioeconomic and racial diversity within and between different universities. This does not mean that all universities have a diverse student body. Unfortunately, available Canadian data do not shed much light on how and when students decide to go to university and/or how they choose their majors; nonetheless, information from York, the University of Calgary, and the University of Victoria indicates that while the decision to attend university may occur long before first year, a decision regarding which university to attend may occur much later. To explain, at the University of Victoria, 59% of an entering class stated that they had decided to go to university before entering high school. In a study of first-year chemistry students at the University of Calgary, researchers discovered that 41% of students decided that chemistry would be their university major while they were still in high school; 17% had made up their minds in junior high school.

Hailey, Kirsten. (2001). Demographics and the changing face of post-secondary education in Canada. *University Manager*, 9(3), 21.

Junor, S., & Usher, A. (2004). *The price of knowledge: Access and student finance in Canada*. Retrieved October 6, 2005 from [http://www.millenniumscholarships.ca/images/Publications/Price\\_of\\_Knowledge-2004.pdf](http://www.millenniumscholarships.ca/images/Publications/Price_of_Knowledge-2004.pdf)

Krahn, Harvey & Andres, Lesley. (1999). Youth pathways in articulated postsecondary systems: Enrolment and completion patterns of urban young men and women. *The Canadian Journal of Higher Education*, 29(1), 47.

This paper uses panel survey data to document the postsecondary educational activity of high school graduates in Edmonton and Vancouver over a five-year period. It enquires whether, in "articulated" postsecondary systems offering a range of institutional choices and a variety of transfer options, large class and gender differences in participation and completion continue to be observed. The results reveal that even in systems explicitly designed to improve access to and encourage completion of postsecondary programs, family background continues to strongly influence postsecondary outcomes. In both cities, social class advantages appear to be passed from one generation to the next, to a large extent, through the high school tracking system, since high school academic program is a strong predictor of postsecondary participation and completion. Gender also continues to matter, but in more subtle ways than in the past. Young women and men are equally likely to participate in the postsecondary system, but they continue to make different types of educational choices that, in turn, determine participation patterns and the acquisition of postsecondary credentials. The paper concludes by discussing the educational policy implications of these findings. As already noted, the British Columbia and Alberta postsecondary systems were designed as articulated systems, so as to offer potential students a range of postsecondary options, including transfer between institutions. The purpose of this paper is to profile the postsecondary educational activity of cohorts of Vancouver and Edmonton high school graduates over a five-year span immediately after graduation. As such, our study design involves examining two systems explicitly designed to enhance access to postsecondary education in Canada and based on the ideological notion of seamlessness throughout the system. Our focus on youth living in large metropolitan areas eliminates the influence of rural residence which is often a serious barrier to postsecondary participation and completion (Andres & Looker, 1997; O'Neill, 1981). Because both cities offer a wide range of postsecondary institutions, high school graduates should be able to "choose" the postsecondary route most suited to their aspirations and achievement levels. Hence, if we were to find evidence of limited impact of family background (socio-economic status), we should find it in these two cities. Our central concerns in this study of recent high school graduates are: a) postsecondary educational participation patterns; and b) postsecondary completion rates. Because of small sample sizes, we cannot distinguish between programs within postsecondary institutions. Instead, for each of the five years of the study, we categorize respondents on the basis of whether they attended universities, vocational/technical schools, or community/university colleges, participated in other postsecondary activities (typically in private institutions that did not provide an accredited degree or diploma), or were non-participants in the postsecondary system. We classify any attendance during the year (i.e., part-time or part-year) as "participation" in the system. (f.6) With respect to completion rates, respondents are categorized according to whether they received (by the end of the five year period) a university degree, a technical/vocational school diploma, a community college diploma, or no credential at all, regardless of the type of institution where they began their studies. It is

important to distinguish participation in vocational or technical institutions from community college participation. Whereas community colleges in articulated systems offer a full range of programs including university-equivalent study, traditionally postsecondary institutions offering vocational or technical training, with a focus on trades, are more likely to attract working class males. By distinguishing between these types of non-university institutions, we are better able to examine the gendered and class-based nature of participation.

- Looker, Dianne, E. (1997). In search of credentials: Factors affecting young adults' participation in postsecondary education. *The Canadian Journal of Higher Education*, 27(2/3), 1.
- Looker, D. E. (2005). *Why don't they go on?: Factors affecting the decisions of canadian youth not to pursue post-secondary education*. Retrieved October 6, 2005 from [http://www.millenniumscholarships.ca/images/Publications/looker\\_en.pdf](http://www.millenniumscholarships.ca/images/Publications/looker_en.pdf)
- McKeown, Brent, MacDonell, Allan, & Bowman, Charles. (1993). The point of view of the student in attrition research. *The Canadian Journal of Higher Education*, 23(2), 65.
- Montmarquette, C., Mahseredjian, S., & Houle, R. (2001). The determinants of university dropouts: A bivariate probability model with sample selection. *Economics of Education Review*, 20(5), 475-84.
- In this paper, we study the determinants of university dropouts with a longitudinal data set on student enrolments at the Universite de Montreal. With a bivariate probit model with selectivity bias, the variables explaining persistence and dropouts are related to the information gathered on the student about his or her interests and abilities. An environmental variable associated with the number of students in first-year compulsory courses is also a determining factor. These results are consistent with human capital and experimental models developed by economists, and psychosociological models pioneered by Tinto to explain dropout behavior. However, the different models offer different policy approaches to the problem of student attrition.
- Moore, Donna, Fleet, Joan, & Rodger, Susan. (2001). Academic decision making among adult learners: Personal and institutional factors. *Canadian Journal of University Continuing Education*, 27(1), 5.
- Not Noted. (1998). *Getting ahead in life: Does your parents' education count?* Retrieved October 6, 2005 from [http://www.cfs-fcee.ca/html/english/research/barriers\\_canadian.php#1](http://www.cfs-fcee.ca/html/english/research/barriers_canadian.php#1)
- This report documents the influence that parental education has on the likelihood that a child will attend college or university. 69% of those children from homes with a parent who completed a post-secondary education versus just 23% from homes in which they did not complete a secondary education. As Dr. Robert Allen notes in *The Education Dividend*, those who obtain a post-secondary education qualification

earn, over a lifetime, 40% more than those without a post-secondary education. Though not surprising, this data confirms the cycle of exclusion for low-income families from post-secondary education.

Orum, J. (2005). *B.C. post secondary admissions information: High school counsellor perspectives*. Retrieved October 6, 2005 from <http://www.bccat.bc.ca/pubs/admissioninfo.pdf>

This project utilizes a survey to gather information about the adequacy of information resources available to secondary school students regarding post-secondary admissions policies, requirements and processes.

Strategic Information Research Institute. (August 2005). *Longitudinal flow patterns of the BC grade 12 class of 1987/1988*. Retrieved October 6, 2005 from <http://www.bccat.bc.ca/pubs/longgr12.pdf>

This study summarizes students' patterns of participation in post-secondary education in their first five years after being in Grade 12 using, as a case example, the B.C. Grade 12 Class of 1987/1988. The cohort's attendance in B.C.'s public post-secondary education system is tracked in each fall session from 1988 to 1992.

### References – USA

Higher Education/K-12 connections may assist student preparation. (2003). *Journal of Developmental Education*, 27(2), 40.

In an adaptation of an article that first appeared in Peer Review in 2003, the writer discusses the Bridge Project's examination of the impact of higher education and K-12 education links on students' preparation for college. She focuses on project research and outlines project recommendations for future research related to higher education institutions.

Trends & indicators in higher education, 2002.(2002). *Connection: New England's Journal of Higher Education and Economic Development*, 16(2), 1-68.

This issue contains data on trends and indicators of New England higher education, including demography, admissions, enrollment, degrees, educational attainment and income, student migration, retention and graduation, financing higher education, and university research and development. It also includes articles related to the data and on New England higher education's links to the Middle East and response to terrorism.

Who is going to college . . . and where? (1991). *The College Board Review*, (160), 27.

The forgotten half: None-college-bound youth in America.(1988). *Phi Delta Kappan*, 69(6), 408-414.

Summarizes recommendations of an interim report focused on the 20 million noncollege-bound American youth barred from many high-paying positions, yet

forced to make it on their own. Recommends various school-to-work programs, "added chances" for training, and enhanced lifelong learning opportunities and increased national investments in youth services.

Adair, V. C. (2001). Poverty and the (broken) promise of higher education. *Harvard Educational Review*, 71(2), 217-239.

In this article, Vivyan Adair argues that educators committed to fostering social and economic equity through education must challenge themselves to understand how crucial postsecondary education is to low-income single mothers, to recognize that this student population is increasingly "at risk," and to work against legislation that at best discourages, and at worse prohibits, these students from entering into and successfully completing postsecondary degree programs. Integrated into her discussion of recent welfare reform legislation are findings from her research. She presents data from interviews, in which students describe their desire to further their education and the frustrating obstacles that make this endeavor difficult and often impossible. Adair demonstrates that low-income, single-mother students experience dramatic and enduring benefits from completing college degrees, but that the opportunity and support required to do so is increasingly limited. She concludes that we must take steps toward ensuring that education remains a truly democratic project that has the potential for enacting social change and fostering economic equity. Copyright (2001) by the President and Fellows of Harvard College. All rights reserved.

Adelman, C., Daniel, B., & Berkovits, I. (2003). *Postsecondary attainment, attendance, curriculum, and performance: Selected results from the NELS:88/2000 postsecondary education transcript study (PETS), 2000. E.D. tabs No. NCES2003394*. U.S.; District of Columbia: ED Pubs.

This report presents selected results from the National Education Longitudinal Study of 1988 (NELS:88/2000). Most of the participants in this study were eighth graders in 1988, graduates from high school in 1992, and at the time of the postsecondary transcript data collection in the year 2000 were around the age of 26 or 27. Of all likely postsecondary participants, 45% earned a bachelor's degree or higher by age 26 or 27. Of those who earned more than 10 college credits, 51% earned a bachelor's degree or higher by age 26 or 27. Sixty-seven percent of those who earned more than 10 college credits and attended a four-year college at any time received a bachelor's degree or higher by age 26 or 37. Of all undergraduates who earned more than 10 credits, 20% attended institutions in more than one state as undergraduates. More than half of Hispanic/Latino students began their postsecondary careers in community colleges, in contrast to 37% of White students and 41% of Black students. Most undergraduates attended school in summer terms. The higher the mathematics attainment in high school, the more likely the student was to complete a bachelor's degree. Data also show that students who attended more selective colleges had higher grade point averages. Other data are provided about student characteristics. Two appendixes contain summary tables and technical notes.

- Arai, K. (1998). *The economics of education: An analysis of college-going behavior*. Heidelberg and New York: Springer. From <http://search.epnet.com/login.aspx?direct=true&db=ecn&an=0475308>  
Analyzes college-going behavior both theoretically and empirically, focusing on the case of Japan. Originally published in Japanese in 1995 as Kyoiku-no-Keizaigaku. The English-language version contains a new appendix that discusses the Japanese education system in order to facilitate understanding by a non-Japanese audience. Presents basic data on college-going behavior and trends in Japan, along with international comparisons. Analyzes college-going behavior as investment in human capital and, applying an alternative approach, examines college-going behavior as signaling. Applies the internal-rate-of-return method to study rates of return to medical and dental education. Investigates the causes of changes in the enrollment rate of men going to college and analyzes whether the internal-rate-of-return method is useful in explaining these changes. Uses cross-sectional data to investigate the attributes of individuals who go to college versus those who do not. Assesses the relative plausibility in the real world of the human capital theory and the signaling theory of college-going behavior. Arai is Professor of Economics at Hitotsubashi University.
- Ayalon, H., & Yuchtman-Yaar, E. (1989). Educational opportunities and occupational aspirations: A two-dimensional approach. *Sociology of Education*, 62, 208-219.
- Bateman, M., & Hossler, D. (1996). Exploring the development of postsecondary education plans among African American and white students. *College and University*, 72(1), 2-9.  
Compared development of postsecondary education plans of African American and White ninth graders, vs variables of the Hossler /Gallagher Three Phase Model of College Choice. Subjects were from 2,930 households with students attending 21 Indiana high schools. Results indicate the variables were more predictive for Whites than African Americans, and different factors influence African Americans' aspirations.
- Betts, J. R., & McFarland, L. L. (1995). Safe port in a storm: The impact of labor market conditions on community college enrollments. *Journal of Human Resources*, 30(4), 741-65.  
This paper examines the impact of the business cycle on enrollments and finances at individual community colleges between the late 1960s and the mid-1980s. The authors find that 1 percent increases in the unemployment rates of recent high school graduates and of all adults are associated with rises in full-time attendance of about 0.5 percent and 4 percent, respectively. Part-time enrollment exhibits similar anticyclical patterns. This link carries over in large part to degrees obtained. In contrast, state and local appropriations per student are procyclical. The authors interpret this funding pattern as a failure to integrate education policy sufficiently closely with labor market policy.

Bickel, R. N., & Others. (1991). Bridging the gap between high school and college in an Appalachian state: A near-replication of Florida research. *Journal of Research in Rural Education*, 7(2), 75-87.

Multiple regression analysis of data from West Virginia school districts revealed that 41 percent of inter-district differences in higher education enrollment rates was explained by percentage of disadvantaged students, percentage of students in college preparatory curriculum (strongly related to income and rurality), and student/teacher ratio.

Bird, J., & Morgan, C. (2003). Adults contemplating university study at a distance: Issues, themes and concerns. *International Review of Research in Open and Distance Learning*, 4(1)

On-campus and distance adult learners (n=20) related the experience of their enrollment decisions, uncovering six themes: fears, motivation, family support, academic preparedness, suitability of programs, and identity change. Motivation was the key to persistence. Pre-entry information, guidance, and preparation for prospective adult open and distance learners could assist informed enrollment decisions.

Boatwright, M. A., Ching, M., & Parr, A. (1992). Factors that influence students' decisions to attend college. *Journal of Instructional Psychology*, 19, 79-86.

Bosworth, D., & Ford, J. (1985). Income expectations and the decision to enter higher education. *Studies in Higher Education*, 10(1), 21-31.

A study of income flow patterns and individual decisions to undertake college-level study suggests that perceived income and other labor market prospects influence student decisions but vary with age and discipline. Although females perceive lower income, that lower income does not statistically affect the decision to attend college.

Bruckner, M. M., Barnes, P. E., & Schulte, L. (2004). School's out: Voices from graduating seniors who choose not to immediately pursue additional education. *NASSP Bulletin*, 88, 46-60.

The purpose of this study was to illustrate specific factors that influenced graduating high school seniors not to immediately pursue additional education. A 13-item survey was developed to determine student and parental satisfaction with aspects of this decision and to further explore influential factors. Participants included students and parents representing five schools in the Midwest. Results are shared pertaining to student and parental perceptions of factors associated with school experiences and factors unique to their lives outside of school.

Brusoski, G. C., Golin, A. K., & Gladis, M. (1992). Parental encouragement and the decision to attend college. *The High School Journal*, 75, 225-232.

Burnell, B. A. (2003). The "real world" aspirations of work-bound rural students. *Journal of Research in Rural Education*, 18(2), 104-113.

A study examined the aspirations of work-bound rural high school students.

Participants were 26 work-bound, college-able, rural high school seniors in 11 schools in New York State. Results revealed several themes, among them participants' perspectives of the real world and the influence of these perspectives on post-high school aspirations. Recommendations based on the results are provided.

Caldwell, C. A., & Trainer, J. F. (1991). The campus role in enhancing college participation in a rural community. *Community Services Catalyst*, 21(1), 3-12. Presents a study of low educational interest and participation area. Quoting from ethnographic interviews, discusses the influences of family, schools, and community on educational decisions. Describes plans to increase public awareness, and develop new curricula and intervention strategies.

California State Univ., Long Beach. Office of the Chancellor. (1989). *A survey of student needs and priorities*. U.S.; California:

The Student Needs and Priorities Survey was administered to 15,619 students on 18 campuses of the California State University. The survey, like similar surveys conducted in 1981 and 1984, addressed four broad concerns: life goals and educational priorities; personal lives, finances, employment status, and family backgrounds; levels of satisfaction with various aspects of academic and social experiences on campus; and obstacles or problems, whether institutional or personal in nature, which might hinder progress toward educational goals. Survey results are discussed in terms of: time commitments, daily schedules, and employment patterns; educational and occupational levels of parents; personal values, career objectives, and educational priorities in instruction, academic support, and student services; factors underlying the decision to attend a particular campus; student evaluations of faculty and instructional quality, academic support services (advising and computing), student services, and the campus experience as a whole; and influence of institutional barriers and personal problems on student retention. A concluding section identifies major policy implications in the data and summarizes significant subgroup variations in the sample. The study offers an understanding of non-traditional student populations, such as commuters, ethnic minorities, part-time students, and working adults.

Chenoweth, E., & Galliher, R. V. (2004). Factors influencing college aspirations of rural west Virginia high school students [computer file]. *Journal of Research in Rural Education (Online)*, 19(2), 1.

Cherednichenko, G. A. (2003). The personal plans of graduates of secondary educational institutions. *Russian Education and Society*, 45(1), 38-54.

A study examined the impact of conversion to a market economy on the personal plans of secondary school graduates in the Russian Federation. Participants were 970 daytime secondary school students, 835 students from specialist colleges, and 705 students from vocational training schools in the Russian Federation. Findings revealed that the majority of participants planned to continue their education. However, there were differences among participants from different institutions regarding orientation toward daytime enrollment and toward combining work and

school, with participants who had graduated from secondary schools substantially ahead of other participants in wanting just to attend school. Overall, vocational school participants had much more down-to-earth plans and orientations than other participants. They were also much more pragmatic and focused more on short-term training. Further findings are presented.

Christensen, S., Melder, J., & Weisbrod, B. A. (1975). Factors affecting college attendance. *Journal of Human Resources, 10*(2), 174-88.

Cofer, J., & Somers, P. (2001). What influences student persistence at two-year colleges? *Community College Review, 29*(3), 56-76.

A study examined the factors that influenced student persistence at two-year colleges, with specific reference to the effect of student financial aid and the Higher Education Act Reauthorization of 1992. Data were obtained from the National Postsecondary Student Aid Surveys of 1992-1993 and 1995-1996. Findings showed that the demographics of persistence had changed in the two-year college during the period 1993 to 1996. The 1996 persisters were much more likely to be dependent, full-time students and were more likely to be over the age of 30, to be classified as a minority, and to be attending a public institution. In relation to financial variables, findings showed that current year subsidies were positively associated with persistence, while the opposite was true for debt, except for higher debt levels in 1996, which were found to be significantly and positively associated with persistence.

Conroy, C. A. (1997). Influences on career choice of rural youth and resulting implications for career development programming: When job awareness and exploration are not enough. *Journal of Vocational Education Research, 22*(1), 3-19. Responses from 612 rural Pennsylvania high school students indicated that 62.6% of the females and 48.5% of the males planned college prep enrollment. Most of their parents had high school education or less. The influence of background and local labor market on occupational self-concept and unrealistic expectations for occupation and salary was demonstrated.

Creamer, E. (1985). The impact of reductions in financial aid on the enrollment plans of aid recipients. *Journal of Student Financial Aid, 15*(3), 5-10.

A study of the influence of reduced state grants on students' decisions to remain at the same college, transfer, or withdraw from college found only a slight relationship between reduced aid and enrollment changes, with most students staying at the same school.

Dai, Y. (1996). Educational plans after high school: A national survey of high school seniors. *Journal of Research and Development in Education, 30*(1), 22-30.

A national sample of high school seniors completed surveys about their educational plans. Results indicated that educational plans were significantly related to race and religious involvement. The racial difference was more pronounced for males than for

females. There was a positive relationship between the likelihood of seeking more education and religious involvement.

- Davis, G. W. (1995). Tuition and fee increases and community college enrollments. *Community College Journal of Research and Practice*, 19(1), 13-21.  
Examines the effects of tuition and fee increases on enrollment at 39 of the 40 Illinois community college districts. Indicates that tuition increases are not responsible for 1993 enrollment losses but that other explanations, including the possibility that increased employment place greater time demand on potential students, may be more appropriate.
- Dayhoff, D. A. (1991). High school and college freshmen enrollments: The role of job displacement. *Quarterly Review of Economics and Business*, 31(1), 91-103.  
The problems facing workers displaced from their jobs have received growing attention during the past decade. Although economists have discussed the possibility that this increased risk should lead to greater education, no one has attempted to estimate the relationship between displacement threats and education enrollments. This article presents empirical estimates of the determinants of high school and college freshmen enrollments, using the displacement rate within the state of residence as a regressor. The regression results indicate that higher displacement rates have a positive, significant effect on enrollments for all groups studied.
- Doty, C. R. (1997). School to work--why students don't know what they want to do! *Tech Directions*, 57, 22-3+.  
The focus of education for pre-kindergarten through grade 12 has changed from maintaining a democracy to maintaining an economy. The purpose is now to produce individuals who will enter college and become scientists and engineers to maintain the economy, and those who do not fit this curriculum are to be ignored. However, in reality, there is a widening gap between those preparing for professional jobs and job demand. Huge numbers of students at colleges and universities still have no career goal in mind. Moreover, there is almost complete ignorance of the aim of vocational education and its many initiatives. However, there is hope, but only if the educators who control the public schools commit themselves to providing a curriculum that is more related to real-life experiences.
- Duran, B. J., & Weffer, R. E. (1992). Immigrants' aspirations, high school process, and academic outcomes. *American Educational Research Journal*, 29, 163-181.
- Ehrenberg, R. G. (2001). The supply of American higher education institutions. *Ford Policy Forum*, , 15-23.  
Considers how higher education supply is adapting to an evolving new world and suggests areas where research would shed light on the strategic choices institutions are making and help guide policy decisions. These include effects of tuition levels on state appropriations and out-of-state enrollment, and effects of admissions policies on different groups of students.

Ellwood, D. T., & Kane, T. J. (2000). Who is getting a college education? family background and the growing gaps in enrollment. *Securing the Future: Investing in Children from Birth to College*, 283-324.

Farrell, W. C. J., Sapp, M., & Johnson, J. H. J. (1994). Assessing college aspirations among at-risk high school students: A principal component analysis. *The High School Journal*, 77, 294-303.

Fielstein, L. L., & Bush, L. K. (1998). Remedial students' perceptions: Pre-college decision making, satisfaction with the freshman year, and self-perceptions of academic abilities. *Journal of the First-Year Experience & Students in Transition*, 10(2), 41-55.

A survey of 196 freshmen seeking to identify noncognitive variables influencing pre-college decision making, satisfaction with the freshman experience, and academic confidence found that academically underprepared students were older, went to college later, reported more satisfaction with academic advising, and were less accepting of American College Testing (ACT) scores as valid measures of academic abilities. Further research is recommended.

Fine, J. G., & Davis, J. M. (2003). Grade retention and enrollment in post-secondary education. *Journal of School Psychology*, 41(6), 401-411.

Students retained in grade have dropout rates three to seven times higher than do their promoted peers, yet little is known about the outcomes for the most persistent of the retained students who graduate high school. The purpose of this research was to examine the post-secondary (PSE) enrollment rates of retained but persistent high school graduates. Ten thousand 1992 high school graduates in the National Education Longitudinal Study (NELS) data base composed the sample. A logistic regression controlling for gender, socio-economic status (SES), race-ethnicity, and achievement yielded odds ratios indicating significantly lower odds of PSE enrollment for retained graduates compared to promoted graduates. Later grade retention generally reduced the odds of PSE enrollment. Findings suggest that retaining students may be related to negative educational outcomes not realized for many years. Copyright (c) 2003 Society for the Study of School Psychology

Frank, K. A., & Lee, V. E. (1987). *Who are the high school graduates who don't go to college? U.S.; Michigan:*

Surprisingly little research has been conducted on noncollege-bound high school graduates who do not fall into some other category such as disadvantaged or unemployed. A study used data drawn from the High School and Beyond research (a multipurpose national longitudinal study of America's high school students) to examine 4,537 high school graduates (class of 1980) who did not attend a two- or four-year college within two years of their high school graduation. Fifty-eight percent of the class of 1980 attended college, leaving 42 percent that did not. Not surprisingly, students from the highest social levels and with the highest levels of academic achievement were most likely to attend college. On the other hand, many of those who did not choose to attend college could have chosen to do so (this

appeared especially true for qualified blacks, who often chose full-time employment over college). Of those 1980 graduates who did not attend college, 3,667 found full-time employment and 870 engaged in "other" activities. Four years after graduation, a full 30 percent of the 870 persons in the "other" category had found full-time employment. The remaining graduates were involved in the following activities: vocational education (9.6 percent), apprenticeship (2.0 percent), government training (0.5 percent), living alone (5.4 percent), Manpower (2.9 percent), a Comprehensive Education and Training Act program (12.1 percent), the Youth Corps (2.8 percent), employer training (11.6 percent), church activities (19.8 percent), noncredit college courses (8.2 percent), and social clubs (17.1 percent).

Fujita-Starck, P. J. (1996). Motivations and characteristics of adult students: Factor stability and construct validity of the educational participation scale. *Adult Education Quarterly*, 47, 29-40.

Effective and responsive adult education programming requires a clear understanding of the characteristics, needs, and aspirations of program participants. This study investigated the factor stability and construct validity of Boshier's Educational Participation Scale (EPS), as part of a series of studies designed to better understand a diverse adult student body participating in a broad program of continuing education. Responses from 1,142 students in programs at a large state university were utilized in the analysis. The results confirmed Boshier's seven factor typology. Reliability of the EPS scales was found to be acceptable. Construct validity of the EPS was investigated by predicting membership in three curricular groups. The findings revealed a distinctive set of student characteristics and reasons for participation between the defined curricular groups. Reprinted by permission of the publisher. Copyright by author.

Grassmuck, K. (1990). Fewer students from middle class enrolling in college. *Chronicle of Higher Education*, 37(11), A1,40.

Fewer students from families with moderate incomes are enrolling at colleges and universities with the drop greatest for highly selective private and public institutions. The trend may be a result of increasing costs of college attendance and of fewer numbers of families in the middle-income group.

Grimes, S. K., & Antworth, T. (1996). Community college withdrawal decisions: Student characteristics and subsequent reenrollment patterns. *Community College Journal of Research and Practice*, 20(4), 345-361.

Describes a study of 208 community college students to determine reasons given for deciding to withdraw, the relationship of student characteristics to those reasons, and patterns of re-enrollment over 1 to 3 years. Discusses the relationship of gender, age, ethnicity, and academic preparedness to persistence. (58 citations) (KRG)

Grogger, J. (1997). Local violence and educational attainment. *Journal of Human Resources*, 32(4), 659-682.

High School and Beyond data were used to analyze how local violence affects high school graduation and college attendance. Moderate violence reduced the likelihood

of graduation by 5.1 percentage points and college attendance by 6.9 points. More substantial violence raised the dropout rate by 27% and reduced college attendance by 15.9 points.

Guppy, N., & Pendakur, K. (1989). The effects of gender and parental education on participation within post-secondary education in the 1970s and 1980s. *Canadian Journal of Higher Education*, 19(1), 49-62.

Data from 1974-75 and 1983-84 Canadian national studies are used to explore the impact of gender and parental education on student decisions to enroll full- or part-time, choose college or university, and enroll in different fields. Results show both factors play decisive roles, with family background influencing men and women differentially.

Hahs-Vaughan, D. (2004). The impact of parents' education level on college students: An analysis using the beginning postsecondary students longitudinal study 1990-92/94. *Journal of College Student Development*, 45(5), 483-500.

A study examined the effects of parents' education level on college students. Data were obtained from 1,629 students who had participated in the Beginning Postsecondary Students Longitudinal Study of 1990/1992/1994. Results revealed differences between first generation students and non-first generation students on expected highest level of education, entrance examination score, aspirations for education, and nonacademic experiences. Results also showed that, for first generation students, college experiences were a stronger influence on educational outcomes than were precollegiate traits whereas, for non-first generation students, precollegiate traits were a stronger influence on both college experiences and educational outcomes.

Hanson, S. L. (1994). Lost talent: Unrealized educational aspirations and expectations among U.S. youths. *Sociology of Education*, 67, 159-183.

A study was conducted to examine lost talent among American youths in the late high school and post-high school years and the extent to which lost talent varies by gender, race, and class. Lost talent was measured in terms of students with early signs of talent who had educational expectations that fell short of their aspirations, had reduced expectations over time, or were not able to realize their earlier expectations. Data were obtained from the senior cohort of the nationally representative High School and Beyond survey of 1986. The results indicated that loss of talent through mismatched aspirations and expectations and particularly through reduced expectations was considerable. Of class, gender, and race, class was found to have the greatest and most consistent effect on lost talent. The risk of loss of talent was sometimes doubled by membership of a lower socioeconomic group.

Hart, D., Mele-McCarthy, J., & Pasternack, R. H. (2004). Community college: A pathway to success for youth with learning, cognitive, and intellectual disabilities in secondary settings. *Education and Training in Developmental Disabilities*, 39(1), 54-66.

Traditionally, youth with learning, cognitive, and intellectual disabilities (LCID)

have not been given the option of participating in and thus benefiting from a postsecondary education. There are school districts and community colleges across the country, however, that are creating opportunities for these youth to have the option of meaningful participation in a postsecondary education while still in secondary school (i.e., Dual Enrollment). The present study involved a national survey of 25 postsecondary education options that support youth with LCID in postsecondary education while still enrolled in secondary school as an empirical foundation for future research on these service models. The main findings indicate that although most programs provide some combination of "life-skills" training and community-based instruction combined with employment training, some innovative service models (i.e., Inclusive Programs) focus primarily on inclusive postsecondary educational services for students with LCID. Inclusive programs tend to be relatively new, to serve fewer individuals than other service models, and are more collaborative (i.e., high schools, colleges and adult service agencies support students). Main survey findings are presented and discussed, followed by detailed profiles of six programs, and recommendations for future research are presented.

Healy, P. J., & Jellema, W. W. (1991). *Financial aid effect on the matriculation decision. ASHE annual meeting paper*. U.S.; Texas:

In order to examine the link between offering financial aid and a potential student's decision to attend a particular college, a case study of matriculation and financial aid offerings at a private, four-year liberal arts college in the northeast was undertaken. The study was prompted by a fourth straight year of significant decline in the college's number of entering students. The study focused on entering students for 1985 and 1986. In the course of these 2 years the college modified only one variable: a significant change in financial aid policy. T-tests on all subjects confirmed an acceptable level of homogeneity across the two pools. The 1985 group received awards averaging approximately 78 percent of their estimated need. The 1986 group received significantly higher levels of financial aid across the board and generally had 98 percent of their estimated need satisfied by their financial aid award in the form of institutional grants. Results indicated that the change in financial aid award sum and percent of estimated need for the 1986 group resulted in a significant increase in the rate of matriculation. Included are 3 tables and 15 references.

Hodges, T. D., & Barbuto, J. E., Jr. (2002). Recruiting urban and rural students: Factors influencing the postsecondary education institution choices of rural versus urban high school students. *College and University*, 77(3), 3-10.

Sampled 49 students in a structured telephone interview to ascertain factors that are most instrumental to high school seniors when selecting postsecondary institutions. Found some differences between urban and rural students' influencing factors.

Jimerson, S. R. (1999). On the failure of failure: Examining the association between early grade retention and education and employment outcomes during late adolescence. *Journal of School Psychology*, 37(3), 243-272.

Past research examining the efficacy of early grade retention has presented mixed results, including numerous deleterious outcomes, especially during adolescence.

The results of this 21-year, prospective, longitudinal study--which includes retained students, low-achieving but promoted students, and a control group--provide evidence that retained students have a greater probability of poorer educational and employment outcomes during late adolescence. Specifically, retained students had lower levels of academic adjustment at the end of 11th grade, were more likely to drop out of high school by age 19, were less likely to receive a diploma by age 20, were less likely to be enrolled in a postsecondary education program, received lower education/employment status ratings, were paid less per hour, and received poorer employment competence ratings at age 20 in comparison to a group of low-achieving students. Furthermore, the low-achieving but promoted group was comparable to the control group in all employment outcomes at age 20. Given the importance of a quality education and socioemotional adjustment for subsequent development, the effects of early grade retention may be further understood by considering a transactional model of development. Reprinted by permission of the publisher.

Johnson County Community Coll., Overland Park, KS. Office of Institutional Research. (2001). *New student survey: 1995-2000*. U.S.; Kansas: Since 1995, Johnson County Community College (JCCC) (Kansas) has been surveying new students each fall to determine their educational objectives and the factors that influence their decisions to attend the college. This report reviews the data obtained between 1995 and 2000 to determine if any trends are evident. The survey samples ranged from 4,760 in 1995 to 3,943 in 2000 (response rates ranged from 16% to 22%). Findings included: (1) there was a slight downward trend in the ratings over the past 4 years, from a mean rating of 4.3 to 4.1 (1 meaning "poor" and 5 meaning "excellent"); (2) the greatest percentage of new student respondents liked the following aspects of JCCC best over a 3-year period: low cost (42%), small class sizes (range 34 to 42%), and location (range 27 to 30%); (3) from 1995 to 2000, at least one-third of all new students intended to transfer to another college or university; (4) the transfer objective was most prevalent among new student respondents of age 24 or younger; (5) from 1995 to 2000, the percent of total new student respondents with career-related objectives ranged from 40% to 48%; (6) mean influences on decision-to-attend values exhibited little variability over the 6 years; and (7) the percent of female respondents over the 6-year period ranged from 61% to 68%.

Jones, D. J., & Watson, B. C. (1990). *"High risk" students and higher education: Future trends*. ERIC digest No. EDOHE903). U.S.; District of Columbia: ASHE-ERIC Higher Education Reports.

Student attrition is a major problem for American colleges and universities because an increasing number of enrollees fit the demographic and socioeconomic profile of "high-risk" students, who consist in general of minorities, the academically disadvantaged, the disabled, and those of low socioeconomic status. Declining enrollments leave institutions with unused building capacity, increased costs per student, funding difficulties, and increasing pressure to lessen the difficulty of the curriculum, thus undermining the school's academic significance. Understanding

attrition and risk is critical to achieving success among the high-risk group by the 21st century. Most students begin school with positive attitudes; however, differences in race, gender, and social class often begin to emerge in early childhood education and increase through high school and college. Through negative conditioning, such as prejudice and lack of understanding among teachers towards the "different" student, low self-esteem is unintentionally created and nurtured. This low self-esteem can in time force students to "cooperate" with forces that create antisocial behavior and influence the drop-out mentality when circumstances become difficult to deal with. High-risk students must be challenged to develop academic and non-academic skills and competencies associated with success in college, and teachers, counselors, and administrators must persist in seeing that programs are completed through appropriate nurturing behavior.

Kaufman, N. S. (1986). Shifts in postsecondary clientele. *New Directions for Institutional Research*, (52), 21-37.

Kempner, K., & Kinnick, M. (1990). Catching the window of opportunity: Being on time for higher education. *Journal of Higher Education*, 61(5), 535-547.

A longitudinal study of 2100 high school students indicates a "window of opportunity" opens for individuals entering higher education immediately after high school. Students delaying college entry are less likely to attain a bachelor's degree. The finding is critical for students without characteristics to mediate the disadvantage of stopping out.

Kiger, D. M., & Johnson, J. A. (1997). Diffusing the adult student's motivation to disengage from a community college's admission process. *Continuing Higher Education Review*, 61

Adults who did not enroll after beginning a community college admissions process (n=93) were compared with 198 who did. "Disengagers" cited cost, lack of financial aid, and uncertain goals as disincentives. Those who disengaged later in the process cited difficulty concentrating and the perception that the college did not care about their success.

King, J. E. (1996). *The decision to go to college: Attitudes and experiences associated with college attendance among low-income students*. U.S.; District of Columbia: A survey investigated the attitudes and experiences that distinguish the low-income high school students who decide to attend college from those who do not. Data were gathered in a telephone survey of 900 seniors in the class of 1995 who took the Scholastic Assessment Test (SAT); the primary sample was 300 of those students who reported family incomes under \$20,000. Data included student characteristics (gender, race, native language), family income, parents' educational level, parents' occupations, SAT scores, post-high school plans, sources of college and financing information, academic self-confidence (in mathematics, science, writing), degree aspiration, influences in college decision-making, preferred college attributes, college preparation, sources of and plans for financing college, and college acceptances. Results are reported in narrative and tabular form. The study found that

rigorous high school courses, high expectations of all students, and availability of college counseling and information were important elements in the decision to go to college. Many of the attitudes and educational experiences associated with four-year college attendance were not common to the low-income students.

Knapp, L. G. (2002). Enrollment decisions of American youth: Which 18- to 21-year-olds are attending college? *College and University*, 77(4), 25-28.

A study investigated the enrollment decisions of 18- to 21-year-old American students. Data were gathered from the October 2000 current population survey produced by the U.S. Census Bureau. Results indicate that just under 50 percent of American youth attended college in October 2000. Asian and white 18- to 21-year-olds were more likely to be enrolled in college than Black or Hispanic youth, and women were more likely to be enrolled than men. The students were least likely to be enrolled in private two-year institutions and most likely to be enrolled in public four-year institutions, and most of the youth attended college on a full-time basis.

Knight, W. E. (1992). *Regional campuses non-enrolling student study*. U.S.; Ohio:

In 1991, a study was conducted at the regional campuses of Kent State University to determine the characteristics of students who were admitted but did not enroll; their reasons for not enrolling; and their opinions of the academic and student services provided. Demographic and admissions data were available for all 952 students who were admitted but did not enroll for fall 1991. Half of these students were randomly selected for a survey. Study findings, based on a 15% response rate, included the following: (1) 65% of the respondents were employed, and most who were not employed were so by choice or due to family responsibilities; (2) 49% said they wished to obtain an associate degree, and 40% said a bachelor's degree was their goal; (3) obtaining an associate degree was the most frequently cited academic goal, preparing for a new career the most important career goal, meeting people the most important social participation goal, and learning skills to enrich their lives the most important personal goal; (4) 46% of the students said they did not enroll because they could not afford to attend; (5) unspecified personal reasons, slow financial aid processing, and distance from the campus were also commonly cited reasons for not enrolling; and (6) 25% to 57% of the respondents rated as high or very high their satisfaction with the availability and quality of academic advising (29-30%), admissions (57%), and financial aid (25%). The survey instrument is attached. (JMC)

Kominski, R. (1987). School enrollment--social and economic characteristics of students: October 1983. current population reports: Population characteristics.

Detailed tabulations are presented on the topic of school enrollment, including the social and economic characteristics of students. Special topics discussed include racial differences in preprimary enrollments, an estimate of high school dropout rates, changes in the sex composition of college students, and the proportions of students who are returning to college after some period of time out of school. Some highlights of the topics discussed are: (1) in October 1983, 57.8 million persons aged 3 to 34 were enrolled in schools; (2) the number of nursery school students has

increased by 75 percent in the past 10 years; (3) whereas elementary school enrollments, at 27.2 million, will soon stop decreasing and begin rising, high school enrollments of 14 million are down substantially from 1977 when there were 15.8 million students; and (4) college enrollments, at 10.8 million, are substantially greater than the 8.2 million students enrolled in 1973. Increases in college enrollment have occurred in part because of rising participation rates of women. In addition, students 35 and older now account for over 12 percent of all college students. Seven tables are included with the text. The main body of the report consists of 25 detailed tables. The appendixes contain 14 supplementary tables, the sources of the data, and an assessment of the reliability of the estimates.

Kramer, G. L., & Hardy, H. N. (1985). Facilitating the freshman experience. *College and University*, 60(3), 242-252.

A Brigham Young University program using students to provide individual advising and orientation assistance to entering students, an effort to reduce the problem of students accepting admission and not showing up, is described and discussed.

Ladany, N., Melincoff, D. S., & Constantine, M. G. (1997). At-risk urban high school students' commitment to career choices. *Journal of Counseling and Development*, 76, 45-52.

A study examined the commitment to the career choices process for at-risk, urban high school students. Participants were 189 students from an urban high school in the Northeast. The results revealed that the tendency to foreclose, which refers to the tendency to commit to career choices before carefully examining all potential career choices, was associated with adherence to career myths. They also indicated that students' level of commitment to their career choices was associated with their vocational identity, their need for occupational information, their perceived barriers to occupational goals, and the number of occupations they considered. These results may be useful for counselors who work with students on career-related issues.

Legutko, R. S. (1998). Family effect on rural high school students'. postsecondary decisions. *Rural Educator*, 20(2), 11-14.

A survey of 285 high school seniors in six rural Pennsylvania schools found that student plans to attend postsecondary education were strongly influenced by parents' educational attainment and somewhat influenced by sibling educational attainment. Family financial situation was not a factor in student choice of postsecondary educational options.

Leung, J. J., Wright, B. W., & Foster, S. F. (1987). Perceived parental influence and adolescent post-secondary career plans. *The High School Journal*, 70, 173-179.

Leung, S. A., Conoley, C. W., & Scheel, M. J. (1994). The career and educational aspirations of gifted high school students: A retrospective study. *Journal of Counseling and Development*, 72, 298-303.

Levine, P., & Nourse, S. W. (1998). What follow-up studies say about postschool life for young men and women with learning disabilities: A critical look at the literature. *Journal of Learning Disabilities, 31*(3), 212-233.

Follow-up studies examining the outcomes for children and youth with learning disabilities who attended special education have appeared in the literature for decades. As American society becomes more technologically advanced and competitive, postsecondary school opportunities and subsequent employment choices that are meaningful and provide a liveable wage teeter out of the reach of young people with learning disabilities. Follow-up study investigators seek to understand how to better prepare youth to meet these challenges by studying their long-term outcomes. The authors review data from 13 frequently referenced follow-up studies regarding post-school outcomes, postsecondary education, and employment, with attention to gender differences, for youth with learning disabilities who were served by and graduated from special education programs nationwide. They take a critical look at contradictions in the findings and discuss five methodological issues that seem to influence the conduct and interpretation of follow-up studies: aggregating data across disability categories; combining data on graduates who have been out of school for unequal periods of time; ignoring the issues of missing data, participant attrition, and incomplete data sets; combining data from different informants; and using non-equivalent databases to make comparisons to a population with no disabilities. The authors provide recommendations for conducting follow-up research on the long-term quality of life of children and youth with disabilities and their families.

Lichtman, C. M., & Others. (1989). Differences between black and white students in attrition patterns from an urban commuter university. *Journal of College Student Development, 30*(1), 4-10.

Examined attrition experience of urban commuter university with substantial Black enrollment. Subjects were 8,062 White students and 2,220 Black students. Results indicated that Black undergraduates dropped out at a higher rate than did White students, even when academic achievement was controlled.

Light, A., & Strayer, W. (2000). Determinants of college completion: School quality or student ability? *Journal of Human Resources, 35*(2), 299-332.

We investigate whether the "match" between student ability and college quality is an important determinant of college graduation rates. We jointly estimate a multinomial probit model of college attendance decisions in which the alternatives are no college and attendance at college in four quality categories, and a binomial probit model of subsequent graduation decisions. By allowing the error terms to be correlated across alternatives and time periods, we identify the effects of observed factors net of their correlation with unobservables. We find that students of all ability levels have higher chances of graduating if the quality level of their college "matches" their observed skill level.

Maag, J. W., & Katsiyannis, A. (1998). Challenges facing successful transition for youths with E/BD. *Behavioral Disorders, 23*(4), 209-221.

Transition programs and procedures for students with disabilities are particularly difficult to implement effectively with emotionally disturbed youths. The greatest obstacle to providing transition activities may be the high drop out rate for these students, which is close to twice as great as that for all students with disabilities. They are also at higher risk of unemployment, incarceration, and mental health problems than youths with other disabilities. Fortunately, some promising transitional programs have been developed for emotionally disturbed youths at local and state levels and in the private sector. There are also important components of and skills for successful adjustment that are beginning to be seen in the literature. In order to be effective, transition services require interagency cooperation, community-based involvement, and a specific description of the skills these youths need to make a successful transition from school to the workplace and postsecondary education.

MacBrayne, P. S. (1995). Rural adults in community college distance education: What motivates them to enroll. *New Directions for Community Colleges*, 23(2), 85-93. Describes a study of rural students' motivations for enrolling in distance education programs and the implications for rural community colleges. Indicates that respondents cited the location of the course and interest in course content as reasons for enrolling and that motivations included degree seeking, information seeking, and job enhancement.

Malmgren, K., Edgar, E. B., & Neel, R. S. (1998). Postschool status of youths with behavioral disorders. *Behavioral Disorders*, 23(4), 257-263. A study investigated differences in employment, degree attainment, and engagement outcomes over 5 years for high school graduates with behavioral disorders (BD) and high school graduates without disabilities. Participants were 20 graduates with BD and 315 nondisabled graduates from the same high schools and graduating classes. Results revealed differences in employment, with participants with BD employed at significantly lower rates than nondisabled participants. There were also differences between the rates of engagement, which were calculated by determining the percentage of graduates in each cohort who were employed and/or were enrolled in postsecondary education at the time of each interview. The rates of completion of any type of postsecondary degree or certificate program were also lower for participants with BD than for nondisabled participants. The results and their implications are discussed, and recommendations for future research are provided.

Marion, P. B. (1985). Relationships of self-image in high school with attendance and grade point average at postsecondary educational institutions. *College and University*, 60, 328-335.

Marjoribanks, K. (1985). Families, schools, and aspirations: Ethnic group differences. *The Journal of Experimental Education*, 53, 141-147.

Marsh, H. W., & Kleitman, S. (2005). Consequences of employment during high school: Character building, subversion of academic goals, or a threshold? *American*

*Educational Research Journal*, 42(2), 331-369.

This study showed that working during high school had negative effects on 15 of 23 Grade 12 and postsecondary outcomes such as achievement, course-work selection, educational and occupational aspirations, and college attendance. These effects were found with control for background variables and parallel outcomes from Grades 8 and 10 based on the 8-year (four-wave), nationally representative National Education Longitudinal Survey of 1988. The only benefit of working was a reduction in postsecondary unemployment, but even this effect was nonlinear. In the case of most outcomes, the effects of hours worked were primarily linear and negative and were consistent across ethnicity, gender, socioeconomic status, initial ability levels, and different types of work. Among continuing students who worked during high school, however, working to save money for college had mostly favorable effects

Massachusetts State Dept. of Education, Boston. Div. of Occupational Education. (1989).

*Survey of Massachusetts high school students. program enrollment decisions, high school experiences, career plans and post high school plans, and opinions about vocational-technical education.* U.S.; Massachusetts:

A survey of Massachusetts high school students in March 1989 compared and contrasted vocational-technical high school students with other high school students (college preparatory and general studies) in four major areas: decision to enroll in vocational-technical or in other programs, high school experiences, post-high school plans and career plans, and opinions about vocational-technical education. The written survey was administered in class to more than 2,000 vocational-technical and 1,500 college preparatory or general studies 10th- and 12th-grade students in 41 schools. Among the findings were the following: (1) vocational students were much more likely to have had opposition to their choice to enroll in a vocational program than either college preparatory or general studies students; (2) most students, especially vocational students, rated guidance services poorly; (3) general studies students were more likely to think that high school experiences were better than they had thought they would be; (4) most college preparatory students planned to attend a four-year college after high school, general students planned to go to a two-year college, and vocational students planned to work full time; and (5) most students either held negative attitudes toward vocational education or thought other people did.

Mazumder, B. (2003). Family resources and college enrollment. *Federal Reserve Bank of Chicago Economic Perspectives*, 27(4), 30-41.

This article reviews the literature on the effects of family income and tuition costs on college enrollment and finds mixed evidence in support of tuition subsidies. The author also presents new evidence showing that college enrollment is especially sensitive to income for families with modest amounts of wealth, suggesting that borrowing constraints may be a factor in limiting access to higher education.

McCartin, R., & Meyer, K. A. (1988). The adolescent, academic achievement, and college plans: The role of family variables. *Youth and Society*, 19(4), 378-394.

Examines the effects of the following variables on the adolescent achievement and postgraduation plans of 4,587 Washington high school students: (1) mother's socioeconomic index; (2) father's socioeconomic index; (3) family socioeconomic status; (4) mother's education; (5) father's education; (6) number of siblings; and (7) Grade Point Average.

McCracken, J. D., Barcinas, J. D. T., & Wims, D. (1991). Aspirations of rural twelfth-grade students in vocational, general, and academic curricula in Ohio and southwest Georgia. *Journal of Vocational Education Research, 16*(1), 51-77.

McElroy, S. W. (1996). Early childbearing, high school completion, and college enrollment: Evidence from 1980 high school sophomores. *Economics of Education Review, 15*(3), 303-24.

This paper analyzes the effect of teenage childbearing on the high school completion and college enrollment of young black and white women in the 1980s using data from the sophomore cohort of High School and Beyond. Results from binary logit models reveal that having a first birth before age 18 has a negative and significant impact on the likelihood of completing a regular high school diploma and the magnitude of the effect is larger for white women than for black women. Having a first birth before age 18 has a positive and significant effect on the probability of completing a GED for white women but not for black women. For women of both races, the effect of early childbearing on four-year college enrollment is negative and significant. It is not only having a first birth before age 18 but early childbearing more generally that impedes young women's educational attainment.

McPherson, M., & Schapiro, M. O. (2000). Financing lifelong learning, trends and patterns of participation and financing in US higher education. *Higher Education Management, 12*(2), 131-156.

Analyzes data on financing U.S. higher education, especially the role governments, institutions, and families play in meeting college costs. Finds fewer affluent students attending private four-year colleges and an increasing concentration of lower income students at community colleges. Considers implications in light of the rising economic value of education and the declining contributions of governments to higher education.

Meier, R. L. (1991). Participation in secondary vocational education and its relationship to college enrollment and major. *Journal of Industrial Teacher Education, 28*(2), 47-60.

Analysis of a sample of 4,905 high school graduates found that 62 percent took some secondary vocational education (SVE); 65 percent of those in college had some SVE, but 55 percent averaged less than 1 credit; students with a concentration in SVE were slightly less likely to enroll in college; and SVE service area was related to college major.

Miller, R. J., Snider, B., & Rzonca, C. (1990). Variables related to the decision of young adults with learning disabilities to participate in postsecondary education. *Journal of Learning Disabilities, 23*, 349-354.

Mohanty, M., & Finney, M. (1997). Evidence on the effect of young adults' wages on their college attendance decisions. *Applied Economics Letters, 4*(12), 733-35.

Monroe, C., & Borzi, M. G. (1988). Communication apprehension and avoidance of postsecondary education. *The School Counselor, 36*, 118-124.

Mueser, P. R., Lee, M., & Podgursky, M. (2004). *An evaluation of Missouri's A+ schools' program* Department of Economics, University of Missouri, Working Papers: 0411. from <http://search.epnet.com/login.aspx?direct=true&db=ecn&an=0763133>  
The A+ Schools Program was initiated to offer financial incentives to students to attend Missouri's public 2-year post-secondary schools. Under the program, the state government provides eligible students with college expenses, but only students in specially designated schools are eligible. It also promotes high school institutional change through the provision of grants to high schools. The program was initiated in 1997 and continues to be phased in gradually. The purpose of this research is to evaluate the effects of the A+ Program on Missouri high schools and post-secondary institutions. The use of administrative data provided by the Missouri state government assures greater reliability of the measures of program participation and postsecondary school attendance than obtained in studies using survey data. Program impacts are based on difference-in-differences estimators using the high school as the unit of analysis. Outcome measures include high school dropout rates, college enrollment rates, average test performance, and grades of high school seniors. The results suggest that high schools that initially have greater enrollments in 2-year colleges are more likely to participate in the program. Schools participating in the A+ program experience declines in dropout rates and A+ designation also increases the number of graduates who enroll in Missouri 2-year public colleges. This increase in enrollment in 2-year public colleges is the result of behavioral changes in two types of students: those who would not have gone to college at all and those who would have gone to other types of post-secondary institutions. Enrollment in 4-year public post-secondary institutions has decreased as a result of the program

Murtaugh, P. A., Burns, L. D., & Schuster, J. (1999). Predicting the retention of university students. *Research in Higher Education, 40*(3), 355-371.  
Survival analysis was used to model retention of 8,867 undergraduate students at Oregon State University from 1991 to 1996. Attrition increased with age and nonresident status; it decreased with higher high-school and first-quarter grades, and attendance in a freshman orientation course. Retention was also associated with race/ethnicity and college at first enrollment. A proportional hazards regression model predicting retention was developed.

Newcomb, M. D., & Bentler, P. M. (1985). The impact of high school substance use on choice of young adult living environment and career direction. *Journal of Drug Education, 15*(3), 253-261.

Nieves, E., & Hartman, K. (2001). Significant events or persons influencing college decisions of conditionally-admitted and early-admitted freshmen. *Research and Teaching in Developmental Education, 18*(1), 5-13.

Examines reasons cited by conditionally-admitted and early-admitted freshmen for choosing to attend college. Finds that parents and family had the greatest influence on both groups; however, the conditionally-admitted students cited these influences more often as the primary influence. Discusses other influences cited by both groups, such as simple student desire and job training.

Ordovensky, J. F. (1995). Effects of institutional attributes on enrollment choice: Implications for postsecondary vocational education. *Economics of Education Review, 14*(4), 335-350.

Examines individual high school graduates' postsecondary enrollment decisions, focusing on effects of institutional cost and proximity. Estimates a multinomial logit model of enrollment probability, using data from the 1980 High School and Beyond Survey. Improving vocationally oriented youths' financial accessibility to two-year colleges is more important than improving institutional proximity. (37 references)

Ordovensky, J. P. (1992). The effects of community colleges on the postsecondary enrollment choice behavior and educational outcomes of recent high school graduates.

Orlans, H. (1989). Empty chairs: What happens to students who don't go to college? *Change, 21*(1), 6-7.

The recent report of the Grant Foundation Commission on Youth and America's Future, "The Forgotten Half," concerning the high school graduates who do not go to college is discussed, focusing on the value society places on a college education.

Paa, H. K., & McWhirter, E. H. (2000). Perceived influences on high school students' current career expectations. *The Career Development Quarterly, 49*(1), 29-44.

A study investigated high school students' perceptions of various factors that could impact their current career expectations. Participants were 464 high school students. Findings suggested that participants were aware of a range of internal and external factors that influenced their current career expectations. Female participants endorsed more types of influence for female friends, mothers, and female teachers than their male counterparts. Other findings of the study, its limitations and implications for future research, and its implications for counselors are discussed.

Painter, G., & Levine, D. I. (2000). Family structure and youths' outcomes. *Journal of Human Resources, 35*(3), 524-549.

National Education Longitudinal Study data were used to examine whether parents' divorce/remarriage or existing family disadvantages caused such outcomes as teens'

lower educational attainment or higher rates of parenthood. Neither divorce nor remarriage during a youth's high school years was strongly correlated with preexisting characteristics of the youth or family.

Paulsen, M. B., & Pogue, T. F. (1988). Higher education enrollment: The interaction of labor market conditions, curriculum, and selectivity. *Economics of Education Review*, 7(3), 275-298.

To determine how a college's curriculum and selectivity may influence enrollment fluctuations, this study analyzed data on 64 private colleges in Iowa and Illinois. Colleges emphasizing arts and sciences had greater enrollment growth during improving market conditions for college graduates; those stressing occupational growth had greater enrollment growth during deteriorating conditions. Includes tables, 28 notes, and 24 references.

Pennington, K. L., McGinty, D., & Williams, M. R. (2002). Community college enrollment as a function of economic indicators. *Community College Journal of Research and Practice*, 26(5), 431-437.

Discusses a study that investigated the ability of national economic trends to predict enrollment in community colleges. Reports that unemployment rate, gross domestic product, dollars disposable income, and personal consumption expenditures are good indicators of trends in community college enrollment, but that consumer price index and average hourly earnings were not significantly correlated to total or per capita enrollment.

Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and whites. *Journal of Higher Education*, 71(2), 117-141.

This study expands traditional college investment decision-making models to include measures of social and cultural capital as proxies for expectations, preferences, tastes, and uncertainty. The model is then used to compare four-year enrollment decisions among African Americans, Hispanics, and whites, using the National Educational Longitudinal Study database.

Pierce, D. R. (2001). *Student pathways through high school to college. preschool through postsecondary*. U.S.; Colorado: Education Commission of the States.

The way students progress from high school to college is in need of change. This paper examines five programs for student pathways and determines which have enough promise to merit consideration by policymakers. "High Schools That Work" prepares students for college by requiring them to take a minimum core of courses. "Tech Prep" includes formal articulation strategies, engaged learning, and other strategies. "Career Academies" are learning communities within high schools that prepare students for both college and career. "Middle-College High Schools" are schools on a college campus that serve at-risk students. "Dual-Credit Programs" discusses the opportunity for high school juniors or seniors who have completed most of their required courses to enroll in college-level courses. Based on the merits of the programs, this paper recommends the following: (1) Adopt a blended program of Career Academies, Tech Prep, and dual-credit programs; (2) create middle-

college high school programs for at-risk students; (3) enact and fund programs that support creative, collaborative solutions at the local level; and (4) create a pathways commission in each state to provide leadership on strategies and to monitor policies for improving the connectivity between high schools and colleges.

Plank, S. B., & Jordan, W. J. (2001). Effects of information, guidance, and actions on postsecondary destinations: A study of talent loss. *American Educational Research Journal*, 38(4), 947-979.

This study uses National Educational Longitudinal Study data to show that information about higher education, guidance, and essential preparatory actions taken by secondary students influence whether they will attend postsecondary educational institutions (PEIs) within 2 years of high school graduation, and, if so, what types of institutions. The conceptual framework is embedded in research on college choice and talent loss. Talent loss is described as the occurrence of promising students not reaching their full educational potential. Choice theory attempts to explain the myriad factors contributing to individuals' postsecondary destinations. We find that increased levels of information, guidance, and critical actions taken are positively and significantly associated with initial enrollment in a 4-year PEI, as opposed to enrollment in a 2-year PEI (full or part time) or no enrollment. These factors explain a large part of the effect of socioeconomic status on postsecondary destination, controlling for high school achievement.

Pope, M. L., & Fermin, B. (2003). The perceptions of college students regarding the factors most influential in their decision to attend postsecondary education. *College & University*, 78(4), 19-25.

Examines the predisposition stage (Hossler and Gallagher, 1987) of the college choice process, especially in relation to minority students. Found that parents and friends play a significant role in college choice; for African American and Hispanic students, institutions' promotional materials, and religious and civic organizations, also influenced college choice.

Pratt, P., & Evans, D. (2002). Assessment of the utility of parents as sources of information about the college decisions of their children. *College & University*, 77(4), 9-12.

Parents and matriculating students responded to identical survey items about the college selection process. Analysis of paired responses indicated that parent and student perceptions of the college selection process were too inconsistent to conclude that parents' information would be useful in understanding their children's decision to attend other schools.

Rojewski, J. W. (1999). Occupational and educational aspirations and attainment of young adults with and without LD 2 years after high school completion. *Journal of Learning Disabilities*, 32(6), 533-552.

A national longitudinal database was used to compare the aspirations and attainment of individuals with and without learning disabilities (LD) 2 years after high school completion. Analyses revealed that individuals with LD reported lower graduation

rates, were more likely to aspire to moderate- (men) or low-prestige (women) occupations, and were more likely to be employed and less likely to be enrolled in some type of postsecondary education program than their nondisabled peers. High educational aspirations in Grade 12 and successful completion of an academic or college-prep high school program were equally important in predicting 2-year postsecondary status for adolescents enrolled in postsecondary education regardless of disability status. However, depending on disability status, different predictors were identified for individuals who were either employed or out of the workforce. These results point to a continued need for transition planning and support for young adults with LD and suggest ways in which professionals can anticipate and adjust for identified differences in aspirations and postsecondary attainment.

- Rojewski, J. W., & Kim, H. (2003). Career choice patterns and behavior of work-bound youth during early adolescence. *Journal of Career Development, 30*(2), 89-108. Employing longitudinal data on 14,376 individuals from the National Educational Longitudinal Study of 1988-1994, a study investigated the career-related aspirations and experiences of work-bound youth during early adolescence. Findings revealed that work-bound youth were more likely to demonstrate poor academic performance, have a lower socioeconomic status, report an external locus of control, have a poorer self-concept, and report less prestigious occupational and academic aspirations than their college-bound counterparts. Other findings of the study and their implications for practice are discussed.
- Ross, D. B., & Others. (1987). Students who drop out before they begin: A study of potential community college students who initiate the registration process but fail to enroll. *Community/Junior College Quarterly of Research and Practice, 11*(2), 93-101. Discusses a telephone follow-up survey of individuals who initiated the admission process at College of Lake County (Illinois), comparing students who registered with non-registrants. Reports that job-related, financial, and personal reasons were given for not enrolling. Suggests that poor academic preparation may also have been a factor.
- Rothstein, A. S., Falvo, R. C., & Wirtzer, J. (1994). Evaluating postsecondary education and employment for high school graduates with physical disabilities. *Education (Chula Vista, Calif.), 114*, 451-458.
- Roueche, J. E., & Roueche, S. D. (1994). Responding to the challenge of the at-risk student. *Community College Journal of Research and Practice, 18*(1), 1-11. Drawing from a study of exemplary community college programs, offers recommendations for increasing support for at-risk students through preenrollment activities, orientation programs, elimination of late registration, basic skills assessment, improved financial aid, expanded mentoring programs, and increased problem solving and literacy activities. Argues that rigorous academic policies improve student success and build enrollments.

Rouse, C. E. (1998). Do two-year colleges increase overall educational attainment? evidence from the states. *Journal of Policy Analysis and Management*, 17(4), 595-620.

Are two- or four-year colleges more efficient at increasing the educational attainment of young adults? I use state variation in two- and four-year college systems to address this question at the state level. I find that the composition and cost of higher education in a state affect the enrollment decisions of individuals in that state. Further, attending a two-year rather than a four-year college may lower the educational attainment of some students, but more students will benefit from the community college alternative. It also most likely costs the state more to educate a student in a four-year rather than a two-year college. As a result, community colleges provide a potentially efficient way to increase access to higher education as well as increase the overall educational attainment of a state's residents.

Saint Petersburg Junior Coll., Florida. (1990). Trends in student enrollment.

*St. Petersburg Junior College Educational Program Abstracts*, 5(2)

Fall 1990 headcount enrollment statistics were gathered for three St. Petersburg Junior College (SPJC) (Florida) campuses (i.e., Clearwater, Tarpon Springs, and St. Petersburg) and compared with data for the previous 3 years. Focusing on degree credit enrollments, the study found that: (1) the total number of students increased collegewide from 16,599 in fall 1987 to 18,719 in fall 1990, with two of the three campuses decreasing in enrollment during this period, and one increasing (headcount enrollment figures for the Health Education Center are provided in a graph); (2) 67.8% of the fall 1990 SPJC students were enrolled in college transfer Associate of Arts (AA) degree programs; (3) 69.6% attended classes part-time; (4) the average student age was 24.1 years for AA students and 29 years for Associate of Science (AS) students; (5) 59.7% of the students were female, and 90.2% were White; (6) for the 4-year period, less than one-third of the students were enrolled in 12 or more credit hours; (7) students under age 19 decreased to the smallest percentage over the 4 years, while remaining more than one-fourth of the college's enrollment; (8) while the percentage of White students remained relatively constant over the 4-year period, the number of Black students increased by 0.2% and the number of Hispanics rose by 0.5%; (9) the percentage of students enrolled in the AA degree program rose from 61.8% to 67.8% over the 4-year period; and (10) the average SPJC student enrolled in fall 1990 differed little from students enrolled in 1987, with the majority being White, female, of traditional college age, and matriculated part-time in an AA program.

Schiltz, F. P. (2002). Transition from secondary to postsecondary education for students with disabilities: An exploration of the phenomenon. *Journal of College Reading and Learning*, 33(1), 46.

Schonert, K. A., Elliott, J. P., & Bills, D. B. (1991). Rural Iowa youth: A descriptive summary of postsecondary persistence five years after high school. *Research in Higher Education*, 32, 269-288.

- Schwartz, J. B. (1985). Student financial aid and the college enrollment decision: The effects of public and private grants and interest subsidies. *Economics of Education Review*, 4(2), 129-144.  
Publicly-provided grants have a significant, positive effect on high school seniors' decisions to enroll in college, particularly among lower income groups. Other types of student financial aid have no measurable effect, according to a study using a binomial logic model based on a multiperiod household utility maximization model.
- Seftor, N. S., & Turner, S. E. (2002). Back to school: Federal student aid policy and adult college enrollment. *Journal of Human Resources*, 37(2), 336-352.  
Data from 1969-1972 and 1974-1977 (surrounding implementation of Pell Grants in 1973) and 1984-1986 and 1988-1990 (surrounding eligibility changes for independent students) show that increased federal financial aid for nontraditional students had a significant effect on their college enrollment decisions.
- Smith, B. W., Spinelli, J. G., & Zhou, Y. (2002). Geographic patterns of student enrollment in Ohio's state-assisted universities. *Ohio Journal of Science*, 102(3), 34-39.  
Reports on a study of geographic patterns of Ohio student enrollment at Ohio's state-assisted universities using cartographic analyses in conjunction with county-based enrollment data from the Ohio Board of Regents.
- Somers, P. (1996). The freshman year: How financial aid influences enrollment and persistence at a regional comprehensive university. *College Student Affairs Journal*, 16(1), 27-38.  
Examines the enrollment and persistence decisions of 674 applicants accepted at one university in the fall of 1992. Results indicate that the university is fulfilling community needs for place-bound students, women students, full-time students, and those students needing a supportive environment. Illustrates how research on aid can benefit institutions.
- Somers, P. (1994). Analysis of the impact of student financial aid on first-time enrollment: A case study. *Journal of the Freshman Year Experience*, 6(2), 101-118.  
A study of 6,644 applicants to 1 public university found, contrary to expectation, negative associations between certain types of student aid and first-time enrollment, and amount of aid and first-time enrollment. Inadequate amounts of aid to promote attendance is suggested as an explanation. Additional research at the institution level on how applicants respond to aid awards is recommended.
- Somers, P., Cofer, J., & VanderPutten, J. (2002). The early bird goes to college: The link between early college aspirations and postsecondary matriculation. *Journal of College Student Development*, 43(1), 93-107.  
A study examined the link between early college aspirations and postsecondary matriculation. Data were obtained from 10,992 students in an eighth to tenth grade cohort surveyed in the National Educational Longitudinal Study. Findings indicated that eighth graders' decision to enroll in college was most affected by predisposition

to a college education and family income, while parental influence and education had less bearing. Students from the highest-income families were much more likely to attend postsecondary education, while those in the lowest income quartile were a lot less likely to attend. In addition, findings showed that when compared to whites, the only ethnic group with a positive association with college attendance was Asian or Pacific Islanders. Furthermore, findings showed that socioeconomic status, student aspirations, college reputation, and college expenses were the factors that most influenced the decision to attend any institution.

St. John Edward P. (1990). Price response in persistence decisions: An analysis of the high school and beyond senior cohort. *Research in Higher Education*, 31(4), 387-403.

A study of the influence of student aid awards and tuition charged on year-to-year persistence by college students in the high school class of 1980 shows persistence decisions in the early 1980s more responsive to aid than tuition increases, suggesting persistence might improve with increased need-based aid alongside tuition increases.

State Univ. of New York, Albany. Systems Office of Institutional Research. (1995). *Attrition and retention of full-time, first-time and full-time, transfer students in baccalaureate and associate degree programs, including postsecondary opportunity students, state university of new york, class of 1992. report no. 4-95*. U.S.; New York:

This publication summarizes the responses of the State University of New York (SUNY) constituent institutions to the 1994 Attrition /Retention Survey and includes details of racial and ethnic composition, partial history of later cohorts as of fall 1994, and trends in attrition and retention among various groups from fall 1977 through fall 1994. The study's basic approach was a cohort survival analysis. The report is organized into four parts. Part 1 provides attrition, retention and graduation data for the following full-time student groups enrolled in SUNY Baccalaureate Degree Programs: full-time, first-time students entering in fall 1988 through 1993; full-time, first-time students entering in fall 1988 by race and ethnicity,; full-time, first-time opportunity students entering in fall 1988 by race/ethnicity; full-time, upper and lower division transfer students entering in fall 1988 through 1993; and full-time, upper and lower division transfers entering in fall 1988 by race/ethnicity. Part 2 contains similar information for students enrolled in SUNY Associate Degree Programs. Part 3 includes SUNY Baccalaureate Trend information for full-time, first-time students, classes of fall 1977 through fall 1994. Part 4 provides SUNY Associate Degree trend information for full-time, first-time students, classes of fall 1977 through fall 1994. Also included is information on SUNY institutions. Contains a 32-item list of related publications.

Stern, D., & Briggs, D. (1999). *Competition or complementarity between work and school: Some insights from high school students*. U.S.; California:

The question of how some high school students succeed in reconciling school and work was examined through a review of research on the topic. Special attention was paid to the comments made by students responding to the National Center for

Research in Vocational Education's longitudinal study that followed approximately 1,500 students in high schools and two-year colleges from fall 1988 through spring 1992. When asked to compare work (paid or unpaid) and school, some students saw school and work as mutually reinforcing, whereas others did not. The question of the relative importance of school and work elicited a continuum of responses, ranging from the view that jobs are valuable only as a way to make money but school is more valuable to the view that jobs are more valuable than school. The intermediate position was that both school and work have value because they demand responsibility and develop various capacities. A number of students acknowledged that combining school and work requires careful management of time. Most students indicated that parents' education is not the only factor influencing students' decision to attend college. Students' own opinions of the relative value of school and work are also important.

Terkla, D. G. (1985). Does financial aid enhance undergraduate persistence? *Journal of Student Financial Aid*, 15(3), 11-18.

A path analysis of the relationship of student background, precollege academic factors, occupational and educational aspirations, institutional characteristics, college performance, and financial assistance to student persistence found that students receiving aid were more likely than others to complete their degrees, and that aid has the third strongest effect on persistence.

Terry Long, B. (2004). How have college decisions changed over time? An application of the conditional logistic choice model. *Journal of Econometrics*, 121(1-2), 271-96.

This paper examines how individuals from 1972, 1982, and 1992 chose whether and where to attend college by estimating the importance of postsecondary costs and quality. Using the conditional logistic choice model to exploit extensive match-specific information between individuals and colleges and include the thousands of alternatives available to prospective students, the paper is able to approximate an individual's college outlook as never before. The results suggest that although tuition price was an important determinant of attendance for the class of 1972, college costs do not explain differences in enrollment for the class of 1992. However, price is still found to be an important factor when individuals choose between colleges, particularly among low-income students. Additionally, college quality has become a more important factor in college decisions.

Tobias, J. L. (2003). The effects of cognitive ability and high school quality on college entry decisions: Nonparametric estimation of parameters of interest. *Applied Economics*, 35(2), 209-15.

The decisions to attend college are analysed and nonparametric predictions compared to those obtained from the widely used logit model. The impacts of measured cognitive ability and proxies for high school quality on the decisions to attend college are examined for a sample of white and black males and females from the USA. Two different parameters of interest which isolate the effects of ability and high school quality on college entry decisions are described and estimated by "integrating out" the effect of other covariates. It is found that measured cognitive

ability is an extremely important determinant of college entry for all race and gender groups. At the same point in the ability distribution, blacks are more likely to select into college than whites, and females more likely than males of the same racial group. Proxies for high school quality such as teacher education, student teacher ratios, school enrolment and library size are shown to have little or no effects on the likelihood of college entry for all race and gender groups. Further, predictions obtained from the flexible nonparametric analysis are found to be quite similar to those obtained from the logit model, suggesting that simpler fully parametric binary choice models perform quite well as modelling college entry decisions.

Trusheim, D., Crouse, J., & Middaugh, M. F. (1990). College applicants' attitudes and enrollment decisions. *Research in Higher Education, 31*, 295-305.

Trusty, J. (1999). Effects of eighth-grade parental involvement on late adolescents' educational expectations. *Journal of Research and Development in Education, 32*(4), 224-233.

A national sample was used to examine the influences of parents' involvement in their children's education on children's postsecondary educational expectations. Parental involvement was assessed when children were in the eighth grade, and their educational expectations were assessed 6 years later. Educational expectations were operationalized as (a) expectation for less than a bachelor's degree, or (b) expectation for a bachelor's or higher degree. Student-reported home-based parental involvement was most strongly predictive of high educational expectations. Parent-reported involvement in school organizations was also predictive of high expectations. Parent-reported home-based involvement and student-reported school-based involvement were only weakly related to expectations. Measures of parental involvement also interacted with socioeconomic status (SES). That is, at higher levels of SES, the effects of parental involvement were stronger in a positive direction.

Trusty, J. (1998). Family influences on educational expectations of late adolescents. *The Journal of Educational Research (Washington, D.C.), 91*(5), 260-270.

Using national data, the author examined the influence of family and parenting variables on expectations regarding education. Demographic, family, and parenting variables were reported by adolescents and parents while the adolescents were seniors in high school, and educational expectations were reported by adolescents 2 years beyond high school. Socioeconomic status (SES) was most strongly related to educational expectations. Adolescents' perceptions of parents' personal involvement and parents' reports of their own behavior were both related to educational expectations. Also, both seemed to interact with SES. Variables quantifying the affective dimension of family relationships were only weakly related to educational expectations. Reprinted with the permission of the Helen Dwight Reid Educational Foundation; published by Heldref Publications, 1319 18th St., NW, Washington, DC 20036-1802. Copyright 1998.

Trusty, J., & Niles, S. G. (2004). Realized potential or lost talent: High school variables and bachelor's degree completion. *The Career Development Quarterly*, 53(1), 2-15. This study examined how background and high school variables affected participants in either realizing their potential by completing a bachelor's degree or experiencing lost talent by not completing a bachelor's degree. A sample of participants who had demonstrated above average cognitive ability and had high postsecondary educational goals when in 8th grade was selected from the National Education Longitudinal Study of 1988 (national longitudinal data from 1988 to 2000; National Education, 2002). Several background and high school variables had strong effects on degree completion. Results were used to develop the Realized Potential or Lost Talent model. Implications for helping young people in their educational-career development are included.

Tuma, J., & Others. (1995). *Educational attainment of 1980 high school sophomores by 1992. 1992 descriptive summary of 1980 high school sophomores 12 years later. high school and beyond. statistical analysis report No. NCES95304*. U.S.; District of Columbia: U.S. Government Printing Office.

Data from the fourth follow-up to the High School and Beyond survey were analyzed to identify patterns in the educational attainment, employment outcomes, and family formation of the 1980 sophomore class in 1992. Those members of the 1980 sophomore class who set high goals in high school tended to have higher average levels of educational attainment 10 years after leaving high school than did those who had lower postsecondary expectation. Regardless of respondents' socioeconomic status or performance on standardized tests, those who delayed entry into postsecondary education were less likely to earn a bachelor's degree or higher. Earnings were significantly related to level of educational attainment. Married respondents earned more than those who were never married or divorced. Respondents' voting rates in the 1988 elections were positively associated with educational attainment. More than 95% of those surveyed valued success in work and having steady work, strong friendships, and better opportunities for their children, whereas only 56% felt that having money was important. Approximately half of the respondents had at least one child by 1992, and nearly 10% had three children. (Forty-six tables/figures are included. Appended are a glossary, technical notes, and nine essay standard error tables.)

Vasigh, B., & Hamzaee, R. G. (2004). Testing sensitivity of student enrollment with respect to tuition at an institution of higher education. *International Advances in Economic Research*, 10(2), 133-49.

This study was conducted to measure the impact of H-University's (HU's) tuition increases on enrollment. Based on an internal survey, this study attempts to explain the sensitivity of student enrollment to tuition variations. In addition, this paper develops an aggregate enrollment model and uses the common economic variables such as tuition, income, wage rates, financial aids, and unemployment rates to explain the sensitivity of demand. The most significant finding of this study is that tuition consideration seems to have a relatively small effect on students' decisions. Actually, enrollment at HU (a private institution) have increased despite higher

tuition rate. Possible justifications could be proposed, such as the necessity of higher education and the fact that higher education is a continued investment in human capital, in which the more relevant decision factor is the corresponding expected rate of return and not just the cost of investment.

Ver Ploeg, M. (2002). Children from disrupted families as adults: Family structure, college attendance and college completion. *Economics of Education Review*, 21(2), 171-84.

One hypothesis as to why children from disrupted (single parent and step parent) families have lower educational attainments than children from intact families is that disrupted families are poorer. This study investigates the relationship between family structure and four year college enrollment and completion. In doing so, the study controls for family income and for other factors that may affect the student's ability to pay for college, such as college costs and financial aid. The study uses the 1980 High School and Beyond Sophomore cohort and its subsequent follow-up surveys. Results show that family income differences can explain much of the differences in college attendance and completion rates between students from disrupted families and students from intact families. However, when measures of the grant aid students receive are also included in models predicting college enrollment and completion, those from disrupted families are still significantly less likely to attend and complete college.

Villella, E. F. (1986). The environmental factors influencing attrition. *Journal of General Education*, 38(3), 221-231.

Offers an economics/business-management perspective on student attrition, focusing on the external macro-environment (including such factors as government funding of education, changing enrollment patterns, and the increased number of postsecondary institutions) and the internal micro-environment (exhibiting characteristics of intangibility, inseparability, and variability) of the educational marketplace.

Villella, E. F. (1986). The environmental factors influencing attrition. *The Journal of General Education*, 38(3), 221-231.

Wahl, K. H., & Blackhurst, A. (2000). Factors affecting the occupational and educational aspirations of children and adolescents. *Professional School Counseling*, 3(5), 367-374.

A review of the research literature on the factors that influence the educational and occupational aspirations of children and adolescents is provided. Findings suggest that effective career guidance programs should actively dispel restrictive occupational stereotypes and widen students' awareness of potential careers, should be developmentally appropriate, should furnish practical and realistic information about a wide range of postsecondary options, and should be responsive to cultural values. Specific recommendations for addressing the career development needs of elementary, middle, and high school students are provided, and recommendations for future research in this area are presented.

- Weglarz, S. (1997). *Survey of fall 1996 non-enrolling applicants*. U.S.; Kansas:  
As part of Johnson County Community College's (JCCC) enrollment management efforts, a questionnaire was designed to gather information about why applicants do not enroll at the college. Survey instruments were mailed to 1,129 potential students in December 1996, resulting in 218 completed surveys. Results are presented for the following areas: (1) reasons for not enrolling; (2) financial concerns; (3) financial aid; (4) student services; (5) assessment and enrollment; (6) educational objectives; and (7) respondent profile. The main reasons cited for not enrolling are: financial concerns (23%), decision to attend another school (13%), work schedule conflicts (10%), too many other commitments or responsibilities (8%), and frustration with the enrollment process (6%). Fifty-three percent of respondents indicated that financial concerns are very or somewhat important in their decision not to enroll. Of interest is the fact that only 19% applied for financial aid. In terms of student services, 25% of the respondents indicated they experienced a problem with the enrollment process, and 18% experienced some difficulty in trying to obtain financial aid. Sixty-two percent indicated they planned to enroll at JCCC in the future. The main educational objectives of these potential students are: (1) transfer (24%); (2) career change preparation (18%); (3) self-improvement or personal interest (16%); and (4) preparation for the job market (14%). Tabled results for the survey and the questionnaire are appended.
- Winter, G. M., & Fadale, L. M. (1986). Noncompleters/Successful leavers. *Community/Junior College Quarterly of Research and Practice*, 10(2), 101-111.  
Reports on a study of the relationship among community college students' intentions at college entrance, satisfaction with the college experience, and reasons for leaving. Suggests that dissatisfaction with the college experience was related to the decision to withdraw for half of the leavers. Discusses implications for retention.
- Yacovissi, W. (1991). The effect of competition on enrollment in the state system of higher education. *Pennsylvania Economic Association: Proceedings of the Sixth Annual Meeting, may 23-25, 1991*, , 553-066.
- Zamanou, S. (1993). *Differences do make a difference: Recruitment strategies for the non-traditional student*. U.S.; Illinois:  
Many colleges and universities lack a comprehensive, fully integrated marketing plan to combat high attrition rates in programs offered to non-traditional students. A clear understanding of the needs of the marketplace is crucial to an effective marketing program. Research suggests that life transitions are what motivate adults to pursue education, that some non-traditional students report holding false expectations about college, and that non-traditional students decide to return to college and decide on a particular college at the same time. Barriers to success of nontraditional students include: sex and age quotas; financial aid practices; regulations; deficiencies in curriculum planning; and faculty and staff attitudes. Direct, specific recruitment seems to meet the needs of a population in search of retraining and may help universities face the realities of a stable or decreasing traditional population pool. Institutions can be placed in one of three stages: (1)

laissez-faire (characterized by removal of barriers or constraints on adults); (2) separatist (adults given separate specially developed programs); and (3) equity (active recruitment of adult learners, a fully integrated curriculum, and services available evenings and weekends). A realistic awareness of the diversity of non-traditional students and what it means for the quality of the institution and the traditional student body is essential for marketing success. Educational institutions must learn to serve the students they now have and could have, not continue in ways that served those students they once had.

### References – Other Geographic Areas

Ahola, S., & Nurmi, J. (1997). Choosing university or vocational college--the formation of educational preferences. *Scandinavian Journal of Educational Research*, 41(2), 127-139.

The formation of educational preferences was analyzed using log-linear modeling and data from a survey of nearly 4,000 applicants for higher education in Finland in the policy context of new vocational-higher education institutions. High status orientation was the main factor determining the choice of university sector.

Arai, K. (1989). A cross-sectional analysis of the determinants of enrollment in higher education in Japan. *Hitotsubashi Journal of Economics*, 30(2), 101-20.

This paper analyzes the determinants of the ratios of enrollment of males and females in universities and junior colleges by using cross-sectional data. We examine socioeconomic as well as purely economic factors such as (1) availability of investment funds (2) proximity of institutions, (3) the father's educational background, (4) the mother's educational background, (5) the occupations of the parents, (6) the mother's participation in the labor force, (7) whether the subjects live in or near large cities, and (8) the ratio of effective labor demand to effective supply. We also examine the strength of the signaling hypothesis by using a variable for self-employment. We have found among other things that the effects of all the factors except (1) and (5) are dependent systematically on the sex of the decisionmaker and the type of institution, i.e., university or junior college. It has been shown that the signaling hypothesis is not supported.

Cherednichenko, G. A. (2005). The life trajectories of young people at different stages of education. *Russian Education and Society*, 47(5), 7-29.

A study examined educational trajectories in the Russian Federation since the 1960s. Findings revealed that between 1988 and 1994 there was a significant decline in the number of young people who received a basic general education, a reduction in the number of students graduating from complete secondary schools, and a decrease in the numbers competing for daytime enrollment in higher education institutions in the Russian Federation. Moreover, the dropout rate began to increase at the end of the 1980s. Other findings of the study are discussed.

Cherednichenko, G. A. (2003). The personal plans of graduates of secondary educational institutions. *Russian Education and Society*, 45(1), 38-54.

A study examined the impact of conversion to a market economy on the personal plans of secondary school graduates in the Russian Federation. Participants were 970 daytime secondary school students, 835 students from specialist colleges, and 705 students from vocational training schools in the Russian Federation. Findings revealed that the majority of participants planned to continue their education. However, there were differences among participants from different institutions regarding orientation toward daytime enrollment and toward combining work and school, with participants who had graduated from secondary schools substantially ahead of other participants in wanting just to attend school. Overall, vocational school participants had much more down-to-earth plans and orientations than other participants. They were also much more pragmatic and focused more on short-term training. Further findings are presented.

Davey, J. (2002). University study in mid and later life--the experiences of early school leavers. *New Zealand Journal of Adult Learning*, 30(2), 18-33.

Interviews with 28 New Zealand adults aged 42-82 who had left school with less than 4 years of secondary education identified contextual (social and familial) factors that did not encourage further education. Return to education was influenced by changed work and family contexts. Gender-based expectations hindered women's choices. Educational participation had economic and personal benefits.

Davey, J. A., & Jamieson, A. (2003). Against the odds: Pathways of early school leavers into university education: Evidence from England and New Zealand. *International Journal of Lifelong Education*, 22(3), 266-280.

Analysis of data on adults who left school before age 17 and later enrolled in university (New Zealand, n=953; England, n=762) identified factors that influenced reentry. A typology emerged: (1) academically able with financial or other constraints; (2) those uncertain about academic abilities or usefulness of schooling; and (3) alienated, rebellious, or freedom-seeking individuals.

Kalacheva, T. G., & Abrosimova, L. V. (2002). School graduates' attitudes toward obtaining a higher education. *Russian Education and Society*, 44(2), 37-48.

A study examined Russian secondary school graduates' attitudes toward obtaining a higher professional education. Participants were 696 graduates of the schools of Nizhnii Novgorod, Russia. The results indicate that the most important motives for obtaining a higher education include motives relating to the intrinsic value of a higher education. It is concluded that the basic orientation of the school graduate is, above all, a social striving to find his or her place in life and only then to become someone in a particular sphere of activity.

Kwong, T. M., Mok, Y. F., & Kwong, M. L. (1997). Social factors and adult learners' motivations in re-entering higher education. *International Journal of Lifelong Education*, 16, 518-534.

A study examined the link between different social factors and adult motivations in

reentering school to acquire a university degree. Participants were 425 students taking part in two programs in a Hong Kong university who filled out questionnaires on their motivation and socioeconomic background. Results reveal that family role and social position significantly affect some of the motivations for reentering school. In general, adult learners with less favorable class positions are more career-oriented, whereas those with more family responsibilities are motivated more by their family concerns. There is a need for further research in understanding the micro-macro links in adult participation in terms of psychological and social factors and in terms of different forms of adult education.

Riphahn, R. T. (2002). Residential location and youth unemployment: The economic geography of school-to-work transitions. *Journal of Population Economics*, 15(1), 115-35.

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