

## Predicting College Retention and Dropout: Sex and Disability

Shirley Jorgensen<sup>1</sup>, Vittoria Ferraro<sup>1,2</sup>, Catherine Fichten<sup>1,2,3,4</sup>, Alice Havel<sup>1</sup>

June 2009

<sup>1</sup>Dawson College

<sup>2</sup>Adaptech Research Network

<sup>3</sup>McGill University, Montreal

<sup>4</sup>S.M.B.D.-Jewish General Hospital, Montreal

## Abstract

The relationship between student dropout and high school grades, demographic factors and psychosocial variables was examined for 40 682 full-time Dawson College students. Overall, low high school grades and older age were the best predictors of dropout. Male students, who generally had lower grades than females, were more likely to drop out than female students. In particular, male students with high school averages below 80% dropped out at substantially higher rates than females. Males also scored lower than females on questionnaire measures of academic communication skills, time spent on out-of-class study, motivation, discipline, following through on commitments and obligations, and involvement in the college community. Compared to students without disabilities, students with disabilities dropped out at lower rates between the first and third semesters, but at higher rates in later semesters. This resulted in similar dropout and graduation rates at the end of ten semesters. Students with disabilities scored lower than their nondisabled peers on measures of academic self-confidence and social connection, were more likely to report feeling alone and isolated, and were more likely to drop out because of a disability or health issue. Female students with disabilities were more likely to feel that their chosen occupation did not require further study. The results provide evidence that patterns of student attrition and the factors that influence these can vary between student sub-populations. Recommendations are made based on the findings.

## Predicting College Retention and Dropout: Sex and Disability

Student dropout not only results in diminished access to employment and earning potential (Fassinger, 2008; Metz, 2006), but it also has a major impact on the finances of colleges and universities (Baum & Payea, 2004; Pascarella & Terenzini, 2005; Summ, Fogg & Harrington, 2003). Over the last 30 years, researchers have developed several theoretical frameworks for understanding and predicting student attrition in higher education. Factors such as socio-demographic background, economic factors, academic preparedness, institutional characteristics, degree of social engagement and psychological processes have all been considered with mixed results. This may be because the relationship between these factors and student dropout and academic performance can differ from one student sub-population to another (e.g., males or students with disabilities).

Despite the decline in male enrollment in higher education since the 1970's (Frenette & Zeman, 2007; Summ, Fogg & Harrington, 2003; Ministère de l'éducation du Québec, 2001) and the increasing numbers of students with disabilities enrolled in postsecondary institutions in both Canada and the US (Tremblay & Le May, 2005; Snyder & Dillow, 2007), little work has been done to determine the factors that contribute to attrition in these two groups. Nor has research attention been paid to the specific supports required to allow them to remain until graduation.

To address these issues, we examined how early departure in a population of 40 682 full-time students from a non-residential English language junior/community college in Quebec is related to high school grades, background and psychosocial variables. The impact of these variables in relation to the dropout rates and academic performance of 17

972 males and 22 710 females, including 526 males and 570 females with disabilities, who entered Dawson College between 1990 and 2006 were our focus. Data were obtained from students' records and from open- and closed-ended survey responses.

Consistent with others' findings (e.g., Astin & Oseguera, 2005), our results show that, overall, the best predictors of both first semester grades as well as dropout in our study were high school average grade and age, with older students being less likely to persist. In the absence of high school grades, the other variables examined also did a reasonable job of predicting attrition, although these added little to the prediction equations when high school grades were available.

#### *Males versus Females*

The attrition rate of male students was higher than that of females. This was especially marked for students with high school averages below 80%, where attrition rate of males was 8%–11% higher than that of females with comparable averages. At high school averages above 80%, the attrition rate of males was only 2% higher. Furthermore, on the Student Readiness Inventory (ACT, 2008), males scored significantly lower than females on measures of academic discipline (i.e., the amount of effort students puts into their schoolwork and the degree to which they see themselves as hardworking and conscientious) and of communication skills (i.e., how attentive students are to others' feelings and how flexible they are in resolving conflicts with others). Compared to females, males also reported spending less time studying out-of-class and tended to report lower levels of motivation – one of the main reasons given by males for leaving before graduation. Males' scores also indicate that they are less likely to follow through on

commitments and obligations and that they feel less connected with and involved in the college community than their female counterparts.

Differences between male and female students on measures of academic performance and psychosocial variables suggest that males may be viewing other elements of their lives as more important than school related tasks, leading them to devote less time to their studies and to become less involved in the college community compared to female students.

#### *Students With and Without Disabilities*

A higher proportion of students with disabilities entered the college with high school averages below 75% than their nondisabled peers. Nevertheless, students with disabilities experienced lower dropout rates between the first and third semesters than students without disabilities, although they dropped out at substantially higher rates in later semesters. This resulted in equivalent dropout rates by the end of the tenth semester. Data from a previous study shows that by the end of the tenth semester students with and without disabilities graduate at the same rate (Jorgensen, Fichten, Havel, Lamb, James, & Barile, 2005).

On the Student Readiness Inventory (ACT, 2008), students with disabilities scored significantly lower than their nondisabled peers on measures of academic self-confidence (i.e., the extent to which students believe they can perform well in school) and social connection (i.e., students' feelings of connection and involvement with the college community). Females with disabilities had scores showing and that they believed that their chosen occupation did not require further study.

When asked about their reasons for dropping out, a significantly larger proportion of students with disabilities (40%) than without disabilities (1%) indicated that they left the college due to a disability or personal health issue. This was also the most frequent reason for leaving indicated by females with disabilities. The most important reasons given by females without disabilities were that they planned to attend university and that they had a change in or uncertainty about their career direction. For males without disabilities, the most frequent reasons were career direction uncertainty or change and dislike of their academic program. Our sample contained an insufficient number of males with disabilities to provide data for this group.

For students with disabilities, lower dropout rates in the early semesters may be related to the fact that there are fewer opportunities for them in the labor force, compelling them to remain in higher education longer. Also, the college's provision of disability related services helps students with their transition to college, and this may improve retention in the early semesters. Registering with the school's disability/access office provides social support, appropriate referrals to other services on campus (e.g., financial aid, peer tutoring), and access to resource materials that allow students to succeed (e.g., material in alternative formats, adaptive computer technologies). As subject material becomes more difficult, however, students may drop out in later semesters.

### *Recommendations*

Given the male profile described above, we recommend interventions that motivate them, increase their commitment to the college, and improve their academic effort and discipline. Males with low high school averages need to be identified early and

directed to the school's academic skills center where they can be assessed and tutored, if necessary, in areas of weakness and where they can receive support in developing successful study skills and the discipline to apply them. Motivation to succeed academically may be fostered through encouraging male students to become involved in extracurricular activities (e.g., clubs) related to their areas of interest and to participate in meaningful work/study programs that allow them to see a connection between what they are learning and its application in the workplace.

Based on our findings on students with disabilities, interventions aimed at building confidence in their academic abilities and encouraging them to participate in both the academic and social life of the college may be useful. Because of our previous finding which showed that the vast majority of students with disabilities do not register with the school's disability/access services (Fichten, Jorgensen, Havel, & Barile, 2006), we recommend that information regarding the availability of services for students with disabilities at the college be disseminated to students before entering the college as well as on a yearly basis. In addition, students with disabilities need to be made aware of the favorable job prospects for graduates with disabilities (Barile, Fichten, Jorgensen, & Havel, 2007) and of the earnings advantages of postsecondary education. As course material becomes increasingly difficult in later semesters, support and encouragement needs to be provided to students with disabilities, especially for those who entered the college with low high school averages. Finally, administrative policies need to be flexible so that students with disabilities can resume their studies after a period of medical leave with as little disruption to their schooling as possible.

## References

- ACT. (2008). *Student Readiness Inventory Users Guide*. Retrieved January 27, 2009, from <http://www.act.org/sri/pdf/UserGuide.pdf>.
- Astin A. W., & Oseguera, L. (2005). Pre-college and institutional influences on degree attainment. In A. Seidman (Ed.), *College student retention* (pp. 275–276). Westport, CT: Praeger.
- Barile, M., Fichten, C. S., Jorgensen, S., & Havel, A. (2007). What happens to junior/community college students with disabilities after they graduate? *Communiqué*, 8(1), 9-10.
- Baum, S., & Payea, K. (2004). *Education pays: The benefits of higher education for individuals and society*. College Entry and Examination Board. Retrieved January 14, 2007, from [http://www.collegeboard.com/prod\\_downloads/press/cost04/EducationPays2004.pdf](http://www.collegeboard.com/prod_downloads/press/cost04/EducationPays2004.pdf)
- Fassinger, R. (2008). Workplace diversity and public policy. *American Psychologist*, 63(4), 252-268.
- Fichten, C.S., Jorgensen, S., Havel, A., & Barile, M.(2006). College students with disabilities: Their future and success - Final report presented to FQRSC (161 pages). Montréal: Adaptech Research Network, Dawson College. *ERIC (Education Resources Information Center)* (ED491585).
- Frenette, M., & Zeman, K. (2007). *Why are all the university students women? Evidence bases on academic performance, study habits and parental influences*. Analytical Studies Branch Research Paper Series. Statistics Canada Catalogue Number 11F0019MIEv- Number 303.



- Jorgensen, S., Fichten, C.S., Havel, A., Lamb, D., James, C., & Barile, M. (2005). Academic performance of college students with and without disabilities: An archival study. *Canadian Journal of Counselling, 39*(2), 101-117.
- Metz, A. J. (2006). *Unique contributions of career-related variables in predicting academic persistence and performance in university 101 college students*. Dissertation Abstracts International Section A: Humanities and Social Sciences, 66(11-A). (UMI No. 3196016)
- Ministère de l'éducation du Québec. (2001). Graduation rates in Quebec and the OECD countries. *Education Statistics Bulletin, 21*. Retrieved February 6, 2009, from [http://www.meq.gouv.qc.ca/STAT/bulletin/bulletin\\_21an.pdf](http://www.meq.gouv.qc.ca/STAT/bulletin/bulletin_21an.pdf)
- Pascarella, E. T. & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey Bass.
- Snyder, T. D., & Dillow, S. A. (2007). *Digest of educational statistics, 2006*. NCES 2007-017. Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved September 4, 2007, from <http://nces.ed.gov/pubs2007/2007017.pdf>
- Summ, A., Fogg, N., & Harrington, P. (2003). *The growing gender gap in college enrollment and degree attainment in the US and their potential economic and social consequences*. Prepared for the Business Roundtable, Washington, DC.
- Tremblay, D., & Le May, S. (2005). *Statistiques concernant les étudiants ayant des besoins spéciaux dans les universités québécoises : 2004–2005 (sommaire)*.

Québec, QC: AQICEBS, Université Laval. Retrieved June 21, 2005, from

[http://www.aqicebs.qc.ca/documents/SOMMAIRE\\_0405.pdf](http://www.aqicebs.qc.ca/documents/SOMMAIRE_0405.pdf)