

Are Students Who Are Satisfied with Their College Experience More Likely to be Retained? Links Between Satisfaction, Grades, Sex and Disability

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Attrition in Postsecondary Education

High rates of student attrition are a major concern of institutions of higher learning, including Quebec's colleges. Student retention and drop-out have important consequences for both society (Canadian Council on Learning, 2006) and students themselves, as dropping out can result in diminished access to employment and earning potential (Fassinger, 2008). High rates of attrition can also have a major impact on the finances of colleges and universities (Pascarella & Terenzini, 2005).

Graduation of the primarily nondisabled student body has recently been reported to be as low as 29% in two-year American colleges (by the end of three years) and 40% in public universities (by the end of five years) (ACT, 2006). Canadian data also show substantial drop-out rates (Statistics Canada, 2004).

Males and Attrition

The academic underperformance of males, and their relatively low college participation and completion rates compared to females, is a world-wide phenomenon that has recently become a concern for many educational jurisdictions, including Quebec. A large and increasing body of evidence shows that males are falling behind their female peers in educational achievement as measured by a variety of criteria (Ministère de l'éducation du Québec, 2003). Data from our own previous studies (Jorgensen, Fichten, Havel, Lamb, James, & Barile, 2003; 2005) show a difference in graduation rates of males compared to females at a large Quebec English language college that ranged from 7% to 10%, even when corrected for high school grades.

Postsecondary Students with Disabilities

There are over 150,000 college and university students in Canada who have some type of disability that affects their studies (Fichten, et al., 2003, Statistics Canada, 2008) and still more

who may not yet be aware they have a disability (Harrison et al., 2007). Also, the number of postsecondary learners with disabilities continues to increase both in Canada and the US, where a recent large scale study showed that 11% of undergraduates had a disability (Snyder & Dillow, 2007). The growth in enrolment of students with various disabilities is also evident in Quebec's colleges, where students with learning disabilities now make up the largest proportion of the population of students with disabilities (Raymond, 2011). The retention patterns and reasons for dropping out of these students differ from those of their nondisabled peers (Jorgensen, Fichten & Havel, 2009), highlighting the need to study factors related to persistence unique to this population.

Factors Influencing Retention

Research on academic retention has focused on various combinations of student characteristics. These include pre-entry characteristics (e.g., age, sex, ethnicity, financial need, level of parental education, socio-economic status, high school performance), student interactions while at college (e.g., full vs. part-time, academic and social integration, student contact with faculty, time spent away from campus, student engagement), psychosocial factors (goals and commitments, personality, psychosocial adjustment, social support, academic self-efficacy, goal orientation, attainment value (importance of doing well)), relative costs (e.g., obstacles, opportunity costs), and satisfaction with the academic experience. Studies investigating these factors have produced variable results (Robbins et al., 2004).

Colleges and other postsecondary institutions are especially interested in student satisfaction as they believe it has a positive influence on retention and academic performance. Although there is a wide-spread belief that such a link exists, empirical evidence to support this is scanty. Among the studies which do suggest a link, several have used the Student Satisfaction Inventory (SSI) published by Noel-Levitz and developed by Schreiner and Juillerat (1994). For example Schreiner (2009) examined whether student satisfaction predicted retention, beyond what could be expected based on student demographic and institutional characteristics, in a sample of 27,816 students at 65 four-year institutions. They found that the factors that predicted retention differed by students' level of advancement in their studies.

Present Study

Given the importance of knowing about predictors of achievement and retention among male students and students with disabilities, in the present study we evaluated students' satisfaction with aspects of college life, and its relation to grades and retention, in a large English speaking college. The goals of the study were (1) to determine whether males and females with and without disabilities differ in what they consider important aspects of college life, (2) how satisfied they are with these aspects, and (3) to determine whether satisfaction can reliably predict grades and whether students will complete their studies.

Method

Included in the study were 6065 students who were enrolled in two and three year diploma programs in a large English language junior/community college, and who responded to the Noel-Levitz Student Satisfaction Inventory (SSI: Schreiner & Juillerat, 1994) in 2001, 2002, 2005, 2009. Three hundred and ninety-four students had a disability (females: $n = 220$; males: $n = 174$) and 5671 reported no disabilities (females; $n = 3479$; males: $n = 2192$). Approximately 1/3 of both male and female students with disabilities had a learning disability (LD) and/or attention deficit disorder (ADD). Approximately $\frac{1}{2}$ of the 394 students with disabilities ($n = 192$) indicated that they had registered for disability related services from the college. The remainder only self-reported their disabilities ($n = 202$) on the SSI (Table 1). The proportion of students with LD/ADD in the registered population (50%) was higher than in the unregistered population (21%).

Table 1. Students Who Replied to the SSI: Breakdown by Sex and Disability Services Registration

Sex	With a Disability		No Disabilities
	Registered	Not Registered (Self reported)	
Female	115	105	3479
Male	77	97	2192
Total	192	202	5671

The enrollment status for each student was examined in the autumn semester of 2009. Students were deemed to have been retained if they were still enrolled or had graduated. If they had not

graduated, or were no longer enrolled at the college at this time they were deemed to have abandoned their studies.

We collected students' standardized grades and their responses on the Noel-Levitz Student Satisfaction Inventory (SSI; Shreiner & Juillerat, 1994). Here, students rate the extent to which they feel they are satisfied that their college is meeting their expectations in a variety of areas using a 7-point scale (1 = Not at all satisfied, 7 = Very satisfied). They also rate the importance of the same areas using a 7-point importance scale (1 = Not at all important, 7 = Very important). Although scores can be examined on an item-by item basis, the measure also provides 12 subscale scores and a single overall satisfaction score. As a basis for comparison, SSI data from two large North American samples (the Community College and the Canadian National) were provided by Noel-Levitz Inc.; data on participants' disability status was not available in these data sets.

Findings and Conclusions

Do males and females differ in what they believe are important aspects of the college experience? No. There was a strong relationship between what the two groups considered important, although males generally had lower scores than females. This was true for students both with and without disabilities. All groups ranked the Instructional Effectiveness subscale highest in importance.

Do students with and without disabilities differ in what they believe are important aspects of the college experience? No. The relative importance of scale items for students with disabilities in our sample correlated strongly with those of students without disabilities. This was true for both sexes. There is a commonality between males and females with disabilities and their non-disabled peers in what they believe are important aspects of the college experience.

What is the relationship between grades and satisfaction? There was only a weak relationship between satisfaction scores and standardized grades for all of the groups evaluated. Correlations between grades and subscale scores were very low (all under .20 and most under .10), and even the correlations with overall satisfaction were below .25 for all groups.

Are females, both those with and without disabilities, more satisfied with their college experiences than their male counterparts? Yes, but... Generally, males in our sample as well as those in the two North American data sets provided by Noel-Levitz Inc. had satisfaction scores that were below those of their female counterparts. These differences persisted even when we covaried grades with satisfaction in our samples.

However, males and females were more or less satisfied with the same things, and SSI satisfaction scores were highly correlated for all groups examined. However, the fact that (1) male overall satisfaction fell below female satisfaction for all scales and samples tested, (2) the peaks and troughs of satisfaction on the twelve scales were similar, and that (3) the average item and scale scores were highly correlated, suggest that the difference in satisfaction between the sexes may, in fact, be a reflection of a general tendency by males to score items lower than females, rather than these being due to real differences between the sexes in the areas with which they were satisfied or dissatisfied (see Figure 1).

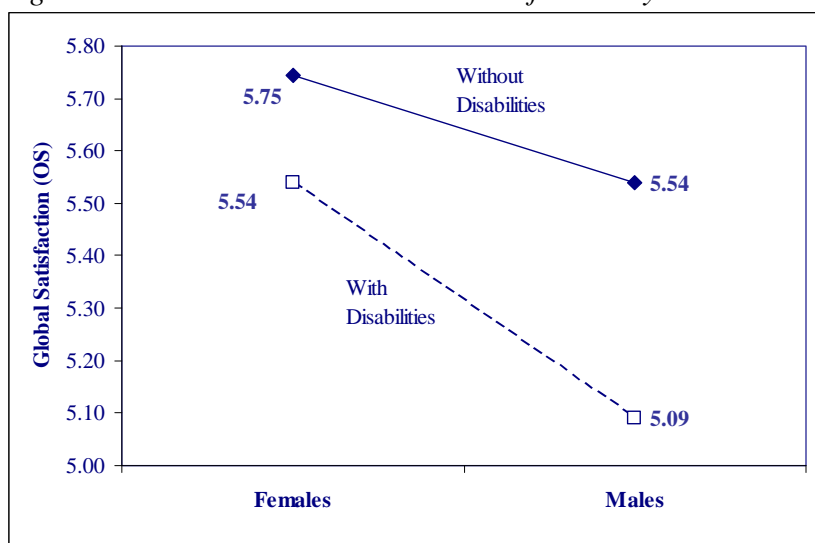
When it came to specific items, it is noteworthy that satisfaction with equipment in the lab facilities being up-to-date had a larger than average difference, and may be an area of greater concern for male than female students, both with and without disabilities. The largest differences were not only in the technical programs where males outnumbered females (e.g., engineering, computer science) but also in science and creative arts programs.

Larger than expected differences in satisfaction were found between males and females with disabilities on the following: knowledge concerning what's happening on campus, the institution's commitment to part-time students, the reasonableness of course change (drop/add) policies, how new student orientation services help students adjust to college, and how student recruitment and admissions personnel respond to prospective students' unique needs and requests.

Do students with disabilities express the same level of satisfaction with their college experience as those without disabilities? No, students with disabilities are less satisfied than their nondisabled counterparts. Generally, both males and females with disabilities expressed lower levels of satisfaction than their nondisabled peers on global satisfaction (Figure 1) as well

as on five of the twelve sub-scales (Table 2). Both sexes had large differences in satisfaction compared to their non-disabled peers on the *Campus Support Services* scale. For males *Student Centeredness* and for females *Academic Services* also had substantial differences in satisfaction. However, these proved to be dependent on whether or not students with disabilities had registered for campus based disability services or not, since those who had done so were more satisfied.

Figure 1. Male and Female Overall Satisfaction by Sex and Disability



Are students with disabilities who registered for disability related services from the college more satisfied? Yes, but... Registering for disability related services on campus had a different association with satisfaction depending on students' sex and the nature of their disabilities. It can be seen in Figure 2 that satisfaction of females who had registered for disability related services was similar to those of nondisabled females and substantially higher than those of females with disabilities who did not register. This was true both for the females who indicated that they had a learning disability (LD/ADD) as well as for those with other disabilities (e.g., visual, mobility, hearing, etc.).

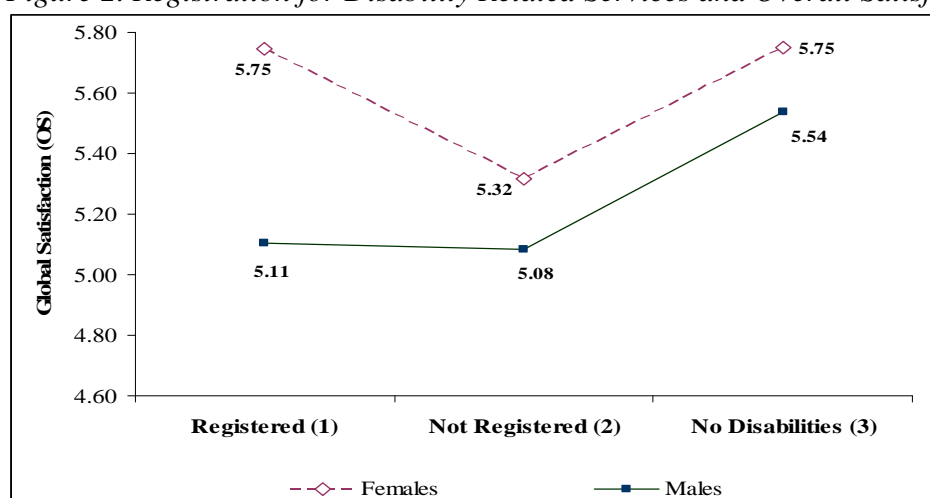
Overall, the pattern for males suggests that registration for disability related services had no impact on satisfaction. This, however, depended on the nature of male students' disabilities. The pattern for the males with learning disabilities (LD/ADD) suggests that they were less satisfied

than males without disabilities, regardless of whether or not they had registered for disability related services.

Table 2. Comparing Satisfaction of Students With and Without Disabilities.

	No Disabilities		With Disabilities		Statistics	
	M	SD	M	SD	F	p
	(1, 1603)					
Campus Support Services	4.96	1.17	4.70	1.35	18.23	<.001
Academic Services	5.40	0.94	5.17	1.10	21.60	<.001
Student Centeredness	5.13	1.05	4.96	1.19	9.07	0.003
Service Excellence	5.10	0.94	4.94	1.05	10.04	0.002
Campus Climate	5.10	0.94	4.93	1.07	10.77	0.001
Instructional Effectiveness	5.12	0.97	4.99	1.09	6.72	0.010
Responsiveness to Diverse Populations	5.42	1.10	5.32	1.32	2.68	0.102
Admissions and Financial Aid	4.91	1.08	4.82	1.14	2.64	0.104
Registration Effectiveness	5.13	0.98	5.04	1.08	2.88	0.090
Academic Advising/Counseling	5.00	1.18	4.92	1.30	1.59	0.208
Safety and Security	5.07	1.12	5.02	1.21	1.00	0.318
Concern for the Individual	4.85	1.13	4.86	1.27	0.01	0.909

Figure 2. Registration for Disability Related Services and Overall Satisfaction by Sex



Males with disabilities other than LD/ADD, on the other hand, not only had satisfaction levels equivalent to that of their nondisabled peers, but in certain areas they expressed even greater

satisfaction with aspects of their college life than either unregistered males with disabilities (other than LD/ADD) or males without disabilities.

Do the benefits of registering for campus disability services differ by sex? Yes. One of the areas where females who registered for disability services were more satisfied than females with disabilities who did not centered around registration for courses: *The personnel involved in registration are helpful; Classes are scheduled at times that are convenient for me; Student recruitment and admissions personnel respond to prospective students' unique needs.* Students with disabilities are permitted to pre-register with the college disability service provider. In doing so, they are able to select their classes early with the assistance of service center staff, who may also recommend teachers who are most likely to be helpful in accommodating students' disabilities. In addition, they are able to select courses and arrange their class schedules at times that are most convenient for them. This personalized assistance at registration is likely reflected in the higher satisfaction in these areas for registered females.

It also appears that registration for disability related services for females creates a sense of connection with the institution that is reflected in higher satisfaction with the item *Most students feel a sense of belonging here.* Reed, Ryerson and Lund-Lucas (2006), in examining the experiences of students with learning disabilities at two Ontario universities, reported that some students felt isolated, and that university life required some adjustment. Our survey of the reasons for leaving of students with disabilities also indicated that students reported feeling alone and isolated when entering college (Jorgensen, Fichten, & Havel, 2009). The campus disability services office can play a role in helping students make the high school – college transition more easily. Satisfaction was also higher in the area of Communication (*I generally know what's happening on this campus; Students are notified early in the term if they are doing poorly in a class*).

Males with disabilities who registered for services also had higher satisfaction scores for two items relating to communication: *I generally know what's happening on this campus* and *I seldom get the "run-around" when seeking information on this campus.* It appears that the service provider has an important role to play in helping students keep informed about what is

happening of campus. Apart from communication, males who registered also felt more satisfied with the institution's commitment to *Commuters* and *Students with special needs* and that *Personal counseling staff care about students as individuals* and felt that *Academic advisors/counselors are concerned about my success as an individual*. This could be a reflection of the initiative the college's disability services office takes in referring students to other services available through the college's student services (e.g., counseling, academic advising, tutoring, transport services for persons with disabilities).

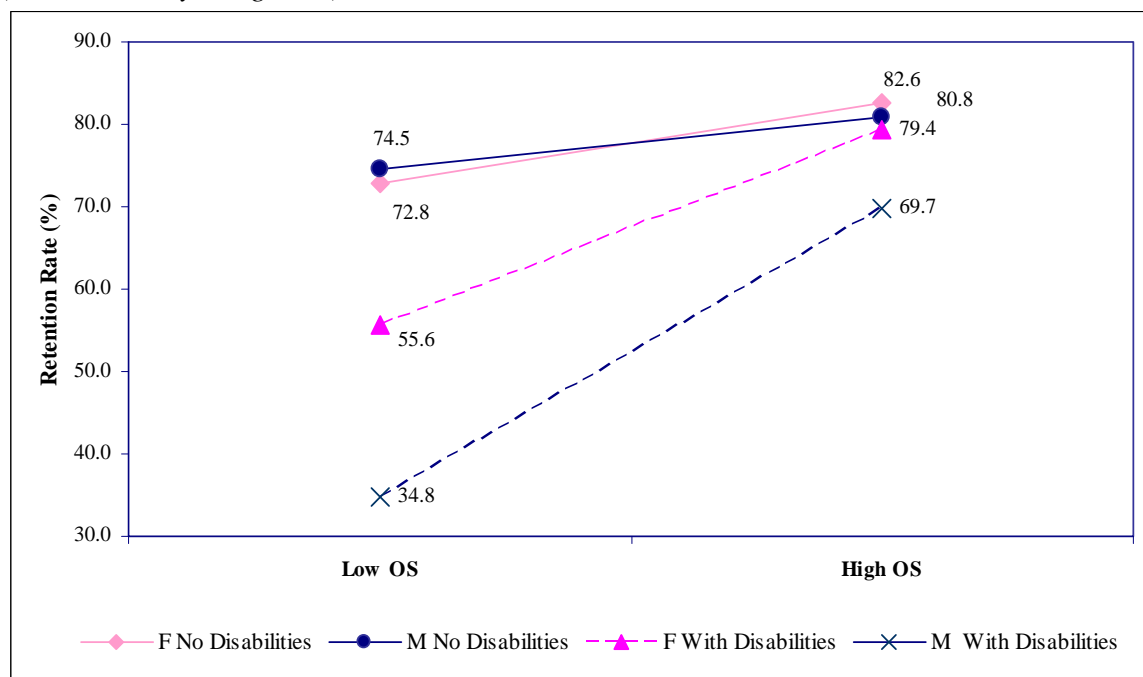
Is low satisfaction with the college experience related to lower retention rates? Yes, but... Students who were more satisfied had higher retention rates. Students who were more satisfied had higher retention rates. Between those with the lowest and highest overall satisfaction, the difference in retention rate averaged about 5% - 10% for males and females without disabilities, but was considerably higher for males and females with disabilities (Figure 3). However, with the exception of males with disabilities, this difference in retention rate disappeared when grades were taken into consideration. Thus, it is difficult to tell whether it was higher grades or higher satisfaction that was associated with higher retention. For males with disabilities, however, both satisfaction and grades made separate contributions to retention. Although, on the whole, satisfaction was only a weak predictor of retention, it was a better predictor for students with disabilities than for students without disabilities.

Recommendations

Care is required when interpreting student satisfaction as a key performance indicator. Since males have a general tendency to score satisfaction lower than females, comparisons across institutions may be biased due to the different proportions of males in the student population.

Nevertheless, satisfaction with equipment in lab facilities being up-to-date seems to be of greater concern for males than females. This was true for students both with and without disabilities. Consequently, this area should be a focus of attention. Of course, this may vary based on students' academic program and it may vary from one institution to another.

Figure 3. Low and High Overall Satisfaction (OS) and Retention Rates by Sex and Disability (Pre-university Programs).



Males with disabilities scored substantially lower than females with disabilities in a variety of areas: knowing what's happening on campus, the institution's commitment to part-time students, the reasonableness of course change (drop/add) policies, how new student orientation services help students adjust to college, and how student recruitment and admissions personnel respond to prospective students' unique needs and requests. Therefore, it is important to focus on these differences to develop a better understanding of why the perceptions of males and females with disabilities differ in these areas.

There was clear evidence that students with disabilities who registered for campus disability services were generally more satisfied than students with disabilities who did not register. Given these findings, it is important that students with disabilities be made aware of specialized college services available to them.

In addition, the needs of males with learning disabilities should be studied more carefully, as they were the least satisfied of the groups we studied. This was true even for those males who registered for campus disability related services. Focus groups/interviews need to be carried out

with the aim of eliciting reasons why males with LD/ADD are not as satisfied as other users of campus disability services. For example, a better understanding of the personality traits, help-seeking behaviors and extent of parental pressure on males with LD/ADD to undertake post-secondary studies would provide insight into the nature of interventions required and the manner in which services are delivered (e.g., more use of computer based delivery of services).

Because Instructional Effectiveness ranked highest in importance for all groups we studied, this area needs to be given special consideration. Although these may vary depending on the institution, in our study the topics with the lowest satisfaction on the Instructional Effectiveness subscale for both males and females were related to their interactions with faculty (i.e., faculty are understanding of students' unique life circumstances; faculty are interested in my academic problems; faculty take into consideration student differences as they teach a course). This suggests sensitivity to students' needs should be the focus of attention.

One way to enhance the relationship between teachers and students with disabilities is through staff development programs which help teachers recognize how different teaching methods impact on students with disabilities, how to consider students with disabilities when preparing course outlines and how to develop flexible modes of course delivery.

Students themselves need to be coached in self-advocacy skills. Self advocacy is described in the Secondary Transition Guide for students entering Humber College Institute of Technology and Advanced Learning (2008) as “*understanding your strengths and needs, identifying your personal goals, knowing your legal rights and responsibilities, and communicating these to others.*” In this way they can develop the confidence to approach their teachers and service providers and effectively express what their needs are. This is especially important for students with LD/ADD, whose disability is hidden. They may not have had as much contact with rehabilitation service providers as students with more visible disabilities who, over time, may have learned to be more accepting of their disability and the need for assistance.