
Executive Summary

Cegep Graduates With Disabilities

College Exit (CRC) Scores of Graduates Registered for Disability Related Services Compared to Non-registered Graduates and Graduates Without Disabilities

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Introduction

The results of self-report surveys administered to first year students indicate that only a small proportion of students with disabilities in the postsecondary population actually register for disability related services at their institutions. Little research has been done to compare the educational outcomes of the two groups. In order to understand the extent that integration into the workforce and higher education has been successful, it is important to find out how both registered and unregistered college students with disabilities fare following graduation. Reliable information on their success needs to be made available to those involved in planning pedagogical changes, counseling students with disabilities and providing disability related services. This project, using the college exit score (CRC) as an indicator, will compare how competitive registered and unregistered college graduates are relative to their non-disabled peers in seeking entry into Quebec universities. In addition it will compare registered and unregistered graduates' perceptions of factors contributing or inhibiting their success, and evaluate whether the extent of the difficulties perceived are correlated to their college exit scores.

Goals and Objectives

The goal of the project was to determine whether junior/community college (cegep) graduates with disabilities have the same opportunities to access higher education as their non-disabled peers. The CRC score (a weighted grade average) is an important determinant in ensuring entrance to universities in Quebec following the completion of a college diploma (DEC). We, therefore, chose to compare the CRC scores of graduates with disabilities (both those who registered for disability related services at a large English college in Quebec, and those who did not) with those of their non-disabled peers. In Part 1 of the study we examined the relative competitiveness in gaining access to university of the three groups of graduates as measured by their exit CRC. To isolate factors important for academic success, in Part 2 we examined whether the ease with which graduates experienced aspects of their college (cegep) studies was related to their CRC scores.

Method

To test our hypotheses we obtained data from a number of archived college databases. The graduate sample consisted of all graduates who completed their diploma between 2002 and 2006 (N = 9406, 5872 males and 3534 females). Of these, approximately a third completed at least one college survey during the period.

We identified whether a graduate had a disability as well as the nature of that disability from two sources: from the archives of the Services for Students with Disabilities office (N = 275) and from self-reports on surveys conducted at the college during this period (N = 145). An estimated 300 - 400 graduates in the sample had a disability, but could not be identified as they neither registered for services nor self-reported. Approximately 60% of all three groups (graduates without disabilities, graduates with disabilities who had registered for disability related services, graduates with disabilities who had not registered) were females. CRC scores and survey results of graduates with learning disabilities (LD) were compared to those of graduates with disabilities other than LD and graduates without disabilities.

Main Findings

Methodological Findings

- In the process of analyzing the research results we found that graduates who completed at least one college survey had higher high school leaving grades and higher CRCs than their counterparts who had not completed any surveys. This was true whether or not the graduate had a disability. This ‘survey responder effect’ has important methodological and conceptual implications for studies of college students and graduates in general, and for students and graduates with disabilities in particular. In this case, because the range of grades on which the analysis was based is constrained, underlying differences between populations may be masked.
- Because of the ‘survey responder effect’ it was not appropriate to compare scores of graduates with disabilities who completed a survey with those of graduates who did not do so. Since graduates with disabilities who had not registered to receive disability related services from the college and who had not completed a survey could not be identified, the only meaningful comparisons for graduates with disabilities either excluded the group who self-reported or excluded the group who had registered for disability related services, but who did not respond to a survey.

Part I – Comparison of CRC Scores of Graduates With and Without Disabilities

- If the survey responder effect was taken into account, there was no significant difference between the CRC scores of graduates with disabilities who had and those who had not registered for disability related services from the college. This was true for both graduates with LD and graduates with disabilities other than LD.
- Graduates with LD tended to have lower CRC scores (and high school averages) than either graduates with other disabilities or graduates without disabilities. However, there was no difference in CRC scores between graduates with disabilities other than LD, and graduates without disabilities.
- Overall, males tended to have lower CRC scores and high school averages than females. However, there were no differences in CRC scores of males and females without disabilities for equivalent high school averages. This was also true for graduates with disabilities other than LD. Males with LD, however, tended to obtain lower CRC scores than other graduates who had similar high school grades.

- The percentage of graduates with LD who had high school averages below 75 was 65%, compared to 34% for graduates without disabilities and to 40% for graduates with disabilities other than LD. The figure was particularly high for male graduates with LD (78%).
- The high school average had a relatively high correlation with the CRC score and was moderately successful in predicting whether a graduate obtained a CRC above or below 26 (a score usually considered acceptable for admission by major universities).

Part II – Relationship Between CRC Scores and Perceptions About College Experiences

- Graduates who were registered for disability related services experienced aspects of their college experience as easier than graduates with disabilities who did not register, and graduates without disabilities. Graduates with disabilities who did not register rated their college experience as hardest.
- Overall, graduates who perceived aspects of their college experience as harder had, on average, lower CRC scores. This pattern of lower CRC scores held for unregistered graduates with disabilities and graduates without disabilities. It did not hold for graduates registered for disability related services. For this group, only 3% had a score in the non-facilitating range. This compares with 23% of unregistered graduates with disabilities and 10% of graduates without disabilities.
- Graduates who registered for disability related services tended to have a higher proportion of graduates who reported more facilitating experiences, but this did not necessarily translate into better CRC scores. CRCs of graduates who had registered for disability related services did not differ significantly from those of unregistered graduates with disabilities.
- When all graduates were considered, nine items related to college experiences rated by respondents were significantly correlated to CRC scores. Three of these were also significant for graduates with disabilities. ‘Study Habits’ and ‘Level of Personal Motivation’ showed the strongest relationship with CRC scores for graduates with and without disabilities. ‘Disability Related Support Services Off-Campus’ was also significant for graduates with disabilities. ‘Level of Personal Motivation’ was particularly important for graduates with disabilities and accounted for the largest amount of variability in CRC scores after high school grades.
- Using regression modeling we found that three variables accounted for 11% - 12% of the variability in the linear relationship with the CRC (Study Habits, Availability of Computers Off-Campus, Attitudes of Professors). ‘Study Habits’ had the strongest relationship. The model predicted that if each of the three variables rose by one unit, then the CRC score increased by 1.34. When the model was run for graduates with disabilities, only the ‘Study Habits’ variable was entered, and it accounted for 9% of the variability in CRC score.
- When the high school average was entered into a hierarchal regression model for all graduates, along with the nine perceptions about college experiences variables, five of the nine variables (High School Grade, Study Habits, Attitudes of Professors, Computers Off-Campus, Level of Personal Motivation) were significant predictors. The High School Grade had the strongest relationship with the CRC score, accounting for about 51% of the total variability of 56%. The remaining four variables accounted for 5.2% of the variability in CRC scores. ‘Study Habits’ accounted for 3.6%, followed by ‘Attitudes of Professors’ (0.7%), ‘Computers Off-Campus’ (0.5%) and ‘Level of Personal Motivation’ (0.4%).
- When the hierarchal regression was repeated for graduates with disabilities, only the High School Grade and one perception about college experiences variable (Level of Personal Motivation) were entered. The ‘Level of Personal Motivation’ accounted for 8% of the linear relationship with the CRC score once the

variability due to the high school average was partialled out. The High School Grade accounted for 54% of the variability.

- The high school average proved to be a moderately good predictor of whether non-disabled graduates obtained a High (>26) or Low (<=26) CRC score, classifying between 75% and 80% of cases correctly. The perceptions about college experiences variables added little in predictive ability. However, these variables alone did result in better than chance prediction, but were a poor predictor of the Low CRC group.
- Four variables showed statistically significant differences between those correctly classified by our discriminant analysis, and those who underachieved relative to their high school averages. Underachievers had lower perceptions about college experiences scores for 'Financial Situation', 'Level of Personal Motivation', and 'Availability of Computers Off-Campus', and higher scores for the 'Accessibility of Building Facilities (doorways, classrooms/labs etc)' variable. In a similar manner, differences between correctly classified and the misclassified overachievers were compared. The only variable showing a significant difference in the mean CRC was 'Private Tutoring'. Graduates who overachieved reported higher scores on this variable (4.65) than those who were correctly classified (4.05) in the Low group.
- A discriminant function analysis was used to determine how accurately non-disabled graduates could be classified in the Low (<=26) or High (>26) CRC range. The high school average alone was able to classify 77% of graduates correctly (78% of the Low group and 76% of the High group). The perceptions about college experiences variables did not add to the ability to classify graduates. Nonetheless, using the four perceptions about college experiences variables identified by our regression model resulted in better than chance prediction (63%). However, the membership of the Low group classified correctly (44%) was poor compared to the High group (78%).
- When the discriminant function was repeated using graduates with disabilities, use of the 'Study Skills' variable identified in our regression modeling did not result in better than chance prediction (57%). When using the high school average alone 79% of cases were classified correctly (88% of the Low group and 66% of the High group).

Conclusions and Implications for Practice

The fact that higher college exit grades could not be associated with registration for disability services should not be interpreted as indicating that registration for disability related services does not result in improved success for this group of students. We do not know the extent to which disability related services contributes to improved retention and graduation of students with disabilities by easing their progress through their college studies. Evidence was provided for this from our examination of graduate responses to the perceptions about college experiences questionnaire. Graduates with disabilities who registered for disability related services perceived aspects of their college experience as significantly easier than non-disabled graduates and graduates with disabilities who did not register.

The more positive perceptions about their college experiences of graduates registered for disability services may well be related to a number of services provided to students with disabilities as they proceed through to graduation. It is possible that many students with disabilities who do not register for disability related services will fail to persist. In a study comparing high school completers and non-completers with LD it was suggested that it may not be academic skill per se but a student's application of skills such as motivation to attend class and complete assigned tasks that are important in determining high school completion. This may be true of college completion as well. Graduates in the present study who registered for disability related services reported higher levels of motivation and more facilitating study habits than unregistered

graduates with disabilities: these may be important determinants of persistence that are facilitated by the service provider.

Nine perceptions about college experiences were positively related to the CRC score for graduates without disabilities. For graduates with disabilities, 'Study Habits', 'Level of Personal Motivation' and 'Disability Related Support Services Off-Campus' were most strongly related to the CRC score. College units and departments that provide support for students in the nine areas identified are likely to enhance student success. The availability of disability related services off-campus was related to higher CRC scores. Therefore, students with disabilities may need to be made aware of the types of community based resources and services available to meet their needs.

The results indicate that graduates with learning disabilities have lower CRC scores than other groups, and compared to other groups, males with LD under-perform relative to their high school averages. Therefore, students with learning disabilities may be considered a 'population at risk.' More intense efforts to assist them in college should probably be made. One possible avenue for this is to provide the kinds of support designed to improve motivation as well as study behaviors.

The findings show that graduates with disabilities who register with the college for disability related services perceive their circumstances, including aspects of the college environment, to be more facilitating of their academic success than do graduates with disabilities who do not register for such services. This suggests that students who currently do not register for such services may benefit from doing so. Thus, the results suggest that publicity campaigns which showcase the benefits of registering may promote student success.

That motivation is important has been demonstrated in our findings and the findings of others. Registering for disability related services may help students sustain the level of personal motivation that is required for them to succeed. Academic advisors need to assist students by providing a forum for students to discuss how instructors can become more sensitive to the needs of students with disabilities, and the role the students themselves may play in achieving this. Because study habits were shown to be linked with college exit grades, advisors and service providers need to support students' efforts to improve their study habits. For example, students can be assisted with developing scheduling and time management skills that would allow them to meet assignment deadlines.

Contact Information

For additional information and the full report, consult the Adaptech Research Network web site (<http://www.adaptech.org>) or contact one of the investigators whose contact details are listed below.

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