Academic Resourcefulness and Transfer Student Success: Direct Entry, College Transfer, and University Transfer Student Comparisons

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Overview

A previous study (Drewes, Maki, Lew, Willson & Stringham, 2012) funded by the College-University Consortium Council found that, after controlling for program and demographic variables, college transfer students entering through an articulation agreement (CAAT Transfer and Articulation) attained significantly higher grades and were significantly less likely to drop-out (i.e., had a higher retention rate) than students entering directly out of high school (High School), whereas transfer students entering outside of an articulation agreement (CAAT Transfer non-articulation) and those involved in a university transfer program (CAAT Transfer University Transfer Program) were comparable to the High School group in terms of academic performance and retention. There is growing evidence (ONCAT, 2013) that college transfer students are performing well at university, yet the question remains as to what factors contribute to the overall successful performance of the CAAT Transfer students at university.

The Model of Academic Resourcefulness, shown in Figure 1, guided the research. Studies show that, in everyday life, individuals having a large repertoire of general learned resourcefulness persevere with challenges, and use problem solving strategies and positive self-talk to deal with challenges and/or to subside anxieties (Rosenbaum, 1980; 1989; 1990; 2000). We also know that highly generally resourceful students are more likely to be very academically resourceful (Kennett 1994; Kennett & Keefer, 2006; Kennett & Reed, 2009), in that they set goals, think positively despite demands or challenges, rely on information and assistance from both social and non-social (e.g., the library) sources, keep records, structure their environment to make learning easier, apply self-consequences (e.g., rewards), and review written material. Even when they do poorly on a test or assignment, they remain optimistic, evaluate the possible reasons for the failure, and restructure study goals and strategies (Kennett & Keefer, 2006; Reed, Kennett, et al., 2009; 2011). In short, they are neither likely to give up nor succumb to anxiety. Instead, they look for ways to rectify the problem and are efficacious that they have what it takes to succeed. Recent research also shows that these students are not only better integrated into the university environment both socially and academically, their reasons for attending university are for more internal reasons (e.g., they like learning, attend for the challenge) and less so to please others and to delay responsibilities (Kennett, Reed & Lam, 2011, Kennett, Reed & Stuart, 2013).

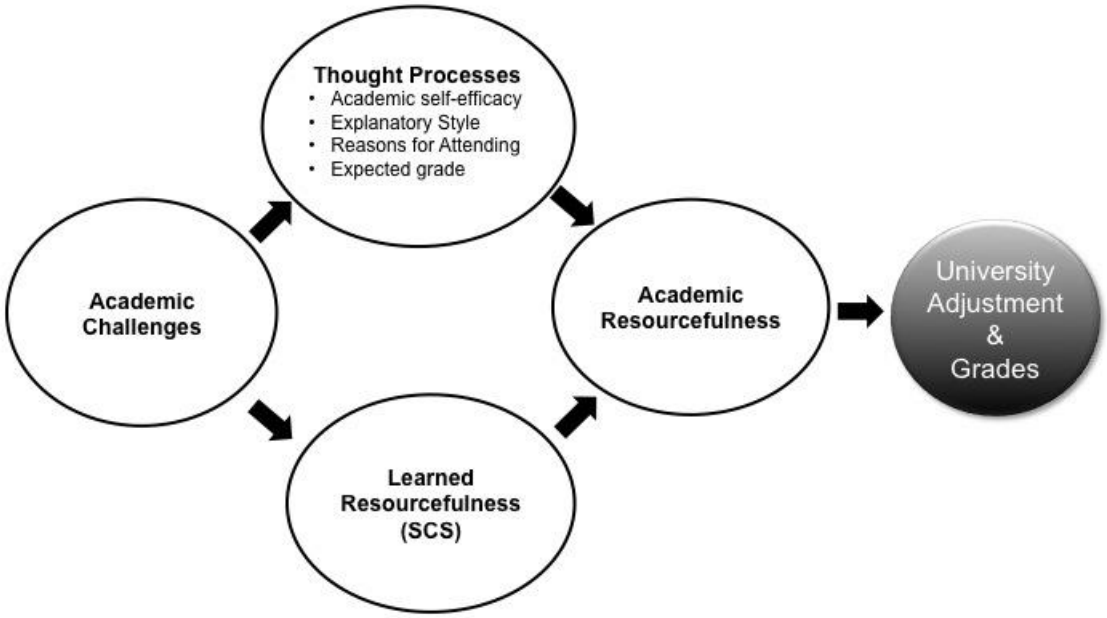

Figure 1. Model of Academic Resourcefulness

Specific research questions of the current project included: What are the factors predicting academic resourcefulness and grades? Based on past investigations (e.g., Kennett, 1994; Kennett & Keefer, 2006, Kennett, Reed et al., 2013), it was expected that the more highly academically resourceful students would be more generally resourceful, have higher academic self-efficacy beliefs, be attending university for more internal reasons and less so to please others and to delay responsibilities, and have an explanatory style that attributes failure to task difficulty and not because of lack of personal effort or ability. Academic resourcefulness was also expected to be a strong and direct predictor of grade performance. We also asked if the psychosocial profiles of university transfer, college transfer students and students entering directly from high school differed. And, do the factors predicting academic resourcefulness, adjustment, and grades differ among the groups?

Method

Participants

The survey invitation was sent to all undergraduate students at Trent University, resulting in a survey population of 7,761. There were 1,545 respondents, for an overall response rate of 20%. Fifty-nine per cent of respondents reported entering university directly from high school; 16% had previous college experience and were categorized as College Transfers; 11% were University Transfers, and 2% of respondents had prior post-secondary experience at both college

and university. A further 12% of respondents were categorized as 'other,' with backgrounds as mature students, international or out-of-province students. Given the focus of the research on comparing transfer and direct entry students, the 'other' group and students with both college and university experience were dropped from further analysis. After case deletion based on excessive missing data or respondents not fitting the criteria for further analysis, 1,302 cases remained, for a usable data response rate of 17%.

The revised data set resulted in a distribution of 743 direct entry (68%), 204 college transfer (19%) and 141 university transfer students (13%). Both transfer groups were similar in terms of the number of transfer credits received, with a mean of 5.1 for college transfer students and 5.4 for university transfers, representing just over one year of full-time study. Both transfer groups also reported similar satisfaction with the number of transfer credits received, with a mean of 3.0 on a 5 point scale.

Measures

The Self-Control Schedule (SCS) assesses general learned resourcefulness and the use of positive self-statements to cope with negative situations (e.g., *"When I realize that I am going to be unavoidably late for an important meeting, I tell myself to keep calm"*), the application of problem-solving strategies (e.g., *"When I try to get rid of a bad habit, I first find out all the reasons why I have the habit"*), the ability to delay immediate gratification (e.g., *"I finish a job that I have to do before I start doing things I really like"*), and knowing how to engage in self-change (e.g., *"If I carried the pills with me, I would take a tranquillizer whenever I felt tense and nervous"* - reverse coded). The schedule consists of 36 items rated on a six-point Likert scale indicating the extent to which individuals evaluate the item as characteristic of themselves (-3 = very uncharacteristic of me, +3 = very characteristic of me). Scores on the SCS range from -108 to 108, with a higher score reflecting greater learned resourcefulness. Recent studies (e.g., Kennett, Humphreys, & Bramley, 2013) show the mean to be around 17 with a standard deviation of 25.

The Academic Resourcefulness Inventory (ARI) measures academic self-control behaviors (Kennett, 1994). It assesses students' use of positive self-statements to manage emotional responses, problem-solving strategies to cope with the demands of academia, and delay avoidance. The inventory consists of 23 items defined by pairs of opposing phrases (e.g.,

"Unafraid versus Afraid about being wrong in class"; "Successful versus unsuccessful meeting deadlines"; "Benefit versus Do not benefit from comments received on written work") that are rated on a seven-point Likert scale according to students' ability or inability to meet various academic demands. Scores on the ARI range from 23 to 161, with a higher score reflecting greater academic resourcefulness. Studies with postsecondary samples (e.g., Kennett, 1994) show the mean to be 108 (*SD* = 17).

The Explanatory Style for Failure Questionnaire was designed based on Seligman's (1991) portrayal of an optimistic person's attribution of failure (Kennett & van Gulick, 2002). It consists of two sections pertaining to a disappointing academic experience. In Section A, the students are asked to think of a disappointing academic situation, and information is gathered on the type of the situation (e.g., test, essay), the grade received, which course the situation occurred in, whether it was required for their degree, whether they dropped that course, what midterm grade they received, and what final grade they expected to receive if the course was still in progress. With the same experience in mind, in Section B, participants are given 18 explanatory statements (e.g., *"My poor performance here reflects a tough professor/marker"*). Participants rate the extent to which they agree or disagree with each statement on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Factor analysis (Kennett & van Gulick, 2002) shows that scale consists of four subscales, with higher scores attributing academic disappointments to bad luck, lack of effort, task difficulty and not to lack of ability. Studies (e.g., Kennett & Keefer, 2006) find the means and standard deviations of the subscales to be around the following values: bad luck, *M* = 10.73, *SD* = 3.91; lack of effort, *M* = 23.08, *SD* = 7.79; task difficulty, *M* = 18.75, *SD* = 6.53; and not to lack of ability, *M* = 15.43, *SD* = 4.11.

The Academic Self-Efficacy Scale (Kennett, 1994) explores students' beliefs about their academic abilities (e.g., *"My study skills are excellent compared to other students", "I think I will receive good grades")*. For this 9-item scale, students rate, on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree), how well each statement describes them (e.g., I know that I will be able to learn new material). Scores range from 9 to 54, with a higher score indicating greater academic self-efficacy. The mean is generally around 40 with a standard deviation of 7 (e.g., Kennett & Keefer, 2006; Kennett, Reed, et al., 2013).

The 26-item Reasons for Attending University Scale by Kennett, Reed, et al. (2013) consists of five subscales: internal reasons (14 items - e.g., *"I like learning"*); other people (5

items - e.g., *"Family expectations"*); attain a better job (2 items - e.g., *"To secure a better job than a high school education would get me"*), university features (3 items - *"Location", "Varsity sports", "Student services"*), and to delay responsibilities (2 items - e.g., *"Nothing better to do"*). To better capture the transfer students' reasons for attending university, 10 addition items were added (e.g., "*Secure a career advancement/change"; "Pathway existed from previous program"; "Trent offered me transfer credits"*). For each item, a 6-point Likert scale ranging from 1 (definitely not a central reason) to 6 (definitely a central reason) is used.

The University Adaptation Questionnaire assesses overall adjustment to university (Crombag, 1968). This 18 item scale asks students to indicate whether statements are descriptive or characteristic of their feelings about their experience at university. Highly adjusted students are satisfied with their way of life, are not missing someone to talk to freely with from time to time, rarely feel bored or lonely, find life as a student pleasant, and feel very much at home. The scale generates total scores that can range from 18 to 108, with higher scores indicating healthier adjustment to university. Kennett, Reed, et al. (2013) observed a mean score of 71.42 (*SD* = 17.02) in their sample of university undergraduate students.

Respondents were also asked a series of demographic questions, including their previous post-secondary experience, transfer credits received on admission, program major, age, gender, first generation status, year of study, last year's GPA, time spent engaging in non-academic activities (e.g., *"Working off campus"; "Providing care for dependent children"; "Providing care for other dependents"; "Volunteering"*), how often they used various support services (e.g., *"Academic skills"; "Career centre"; "Disability services"; "Department advisor/faculty advisor"*), preparedness for university (e.g., concerning: *"academic writing", "academic reading", "lab reports", "library research", and "time management"*), and expected grade.

A final section of the survey included a set of questions only for transfer students, including questions about satisfaction with their transfer experience (the process, availability of information, and satisfaction with the number of transfer credits received), whether they came in under an articulation agreement, and an assessment of how their university experience aligned with or differed from their expectations. There were also open-ended options for students to describe additional supports or services that would have been helpful in their transition to university.

Procedure

In the fall of 2013, Trent University undergraduate students were invited to participate in a study exploring the factors associated with academic adjustment and success, and whether these factors differed for students entering university directly from high school versus students transferring from colleges or other universities. Via an online research management system, students completed a package of established and psychometrically sound questionnaires assessing general and academic resourcefulness skills, academic self-efficacy, explanatory style for failure, reasons for attending university, and university adjustment.

Results and Discussion

Statistical Analysis

Group differences were evaluated using chi square test for independence and goodness of fit for frequency distributions, and multivariate analysis of covariance and analysis of covariance, controlling for number of university courses at the time of completion of the survey, for the psychosocial variables. For the Direct Entry (D), College (CT) and University Transfer (UT) groups, separately, standard multiple regression analyses were used to determine the unique predictors of academic resourcefulness, university adjustment and year end grades. Unless otherwise stated, significance was set at alpha .05. For further information on the statistical output, contact the first author of this report.

Notation in Tables and Figures, indicating group differences, are arranged in order of the group having the highest mean to the group having the lowest mean. For example, the notation CT > UT > D signifies that the mean of College Transfer groups mean was significantly higher than the means of University Transfer and Direct Entry groups for that particular variable, and that the mean of the University Transfer group was also significantly higher than the Direct Entry group.

Demographics

Overall, respondents were fairly representative of the Trent University undergraduate population (see Figure 2). Eighty nine per cent of respondents were students at the Peterborough campus, with 11% studying at Trent's Oshawa campus. The full-time/part-time split was similar, at 88% full time, 12% part-time. Respondents were primarily of Caucasian ethnicity

(82%), with 6% Asian and 3% Black/African Canadian/African Canadian being the next greatest proportions. The most common degree programs being pursued by respondents were: B.A. (39%), B.Sc. (27%), B.Sc.N. (13%) and B.B.A. (6%).

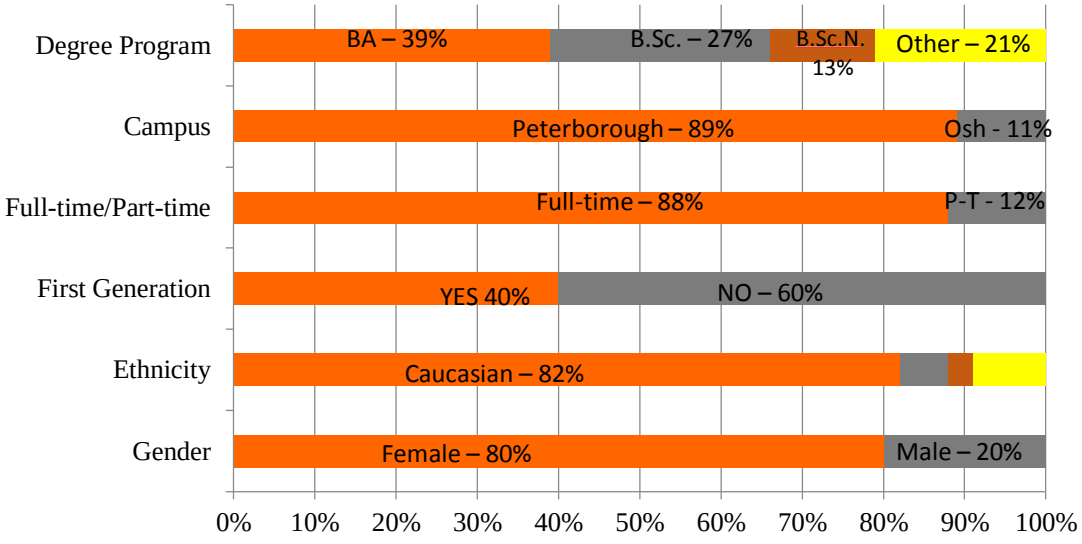

Figure 2. Summary of respondent demographics

The gender distribution of respondents was 80% female, 20% male. The actual gender distribution of undergraduate students at Trent is 66% female, 34% male; however, the 80/20 split is consistent with the typical female response bias experienced by survey-based researchers in the Psychology department at Trent.

Significant differences were found in gender distribution by entrance type, with direct high school entrants being 81% female, university transfer students being 87% female and college transfer students 76% female (see Table 1). This finding is consistent with the well-established trend of female participation in university undergraduate studies exceeding male participation by an average of 15% (AUCC, 2011; Drewes, 2009), whereas college participation tends to be more equally distributed between males and females (Colleges Ontario, 2013). The higher proportion of males in the college transfer group suggests that the college to university transfer pathway might be a promising solution through which to increase male participation in university.

Table 1. Gender distribution by entrance type

	Female	Male
Direct High School *N* = 740	81%	19%
University Transfer *N* = 141	87%	13%
College Transfer *N* = 202	76%	24%

The mean age of the sample was 21.9 years. Significant differences were found across all three groups, with the college transfer students being the oldest at a mean age of 26.2 years. University transfer students were slightly younger, with a mean of 25.4, and direct entry students were the youngest, at 19.7 years. These findings are not surprising, particularly given that many of the college transfer students would have completed a previous credential prior to beginning their university studies. Variability across the age groups is reduced when looking at median age, which ranges from 20 to 24 years across the three entrance types. See Table 2.

Table 2. Age distribution by entrance type

	N	Mean	Median	Range
Sample	1087	21.9	21	17-59
Direct High School	743	19.7	20	17-41
College Transfer	203	26.2	24	19-56
University Transfer	141	25.4	23	19-59

Respondents were representatively distributed across all years of the undergraduate program, with 34% in Year 1, 24% in Year 2, 24% in Year 3 and 18% in Year 4. Three per cent of respondents had greater than 20 credits, suggesting they were either making up additional credits to meet degree requirements or were pursuing a second degree. There were significant differences in credits achieved by entrance type, with direct entry students having completed an average of 8.3 credits at the time of completing the survey, compared to college and university transfer students having an average of 10.4 and 9.9 credits respectively. Given this difference in credits achieved, we controlled for number of credits achieved in subsequent group comparisons in order to equalize respondents on the basis of academic experience.

The survey finding with respect to first generation status was somewhat puzzling. Forty per cent of students responded affirmatively to the question, "Are you the first in your family to

attend university?" The official institutional first generation student proportion is 11%. Further investigation is required to understand this data anomaly.

The most striking finding with respect to student use of academic support services was the overall low levels of service use across all services and all student groups. The lowest level of non-use of a service was 55% of students reporting not using the services of an Academic Advisor or Senior Tutor, followed by 65% of students reporting zero usage of the Academic Skills Centre, which offers supports in research, writing and study skills. There were patterns of heavy use of selected services as well, with 12% of students reporting using Academic Advisors five or more times per term, 10% using the Academic Skills Centre five or more times per term, and 9% consulting a Departmental Advisor five or more times per term. The only group differences found in the use of academic support services were that college transfer and direct entry students used the Academic Skills Centre more than university transfer students, and that university transfer students used Academic Advising services to a greater extent than did college transfer and direct entry students. This finding contradicted the expectation that all transfer students would use advising to a greater extent, given the added complexity of planning their academic programs when entering with advanced standing and transfer credits, and the need to ensure they meet program requirements. A summary of these findings are shown in Figure 3.

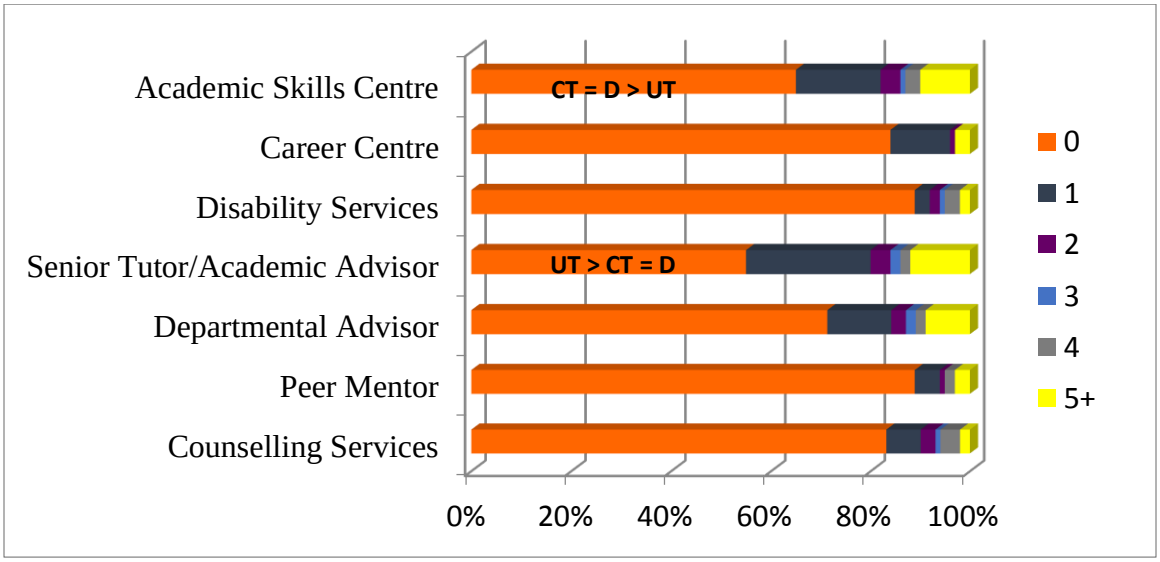

Figure 3. Student use of academic support services

The majority of students reported feeling somewhat to extremely well prepared for a range of academic and administrative aspects of their university experience, including foundation knowledge in their discipline (83%), academic reading (77%) and writing (76%), library research (61%), preparing lab reports (55%), time management (73%), and awareness of university services (58%) and the application process (63%). Students transferring from another university reported higher levels of preparedness than college transfer and direct entry students across all factors except preparing lab reports and library research. Both university and college transfer students reported feeling a higher level of preparedness for library research than did direct entry students. These findings are not surprising, given these students already had experience at another university or college. College transfer students reported feeling more prepared for writing lab reports, a skill they likely developed in their college programs.

Table 3. Preparedness for the university experience

	Extremely Unprepared to Somewhat Unprepared	**Somewhat Prepared to Extremely Prepared**	**Group Differences**
Foundation Knowledge in my discipline	16%	83%	None
Academic Writing	23%	75%	**UT > CT = D**
Academic Reading	23%	77%	**UT > CT = D**
Preparing Lab Reports	45%	54%	**CT > UT = D**
Library Research	39%	61%	**CT = UT > D**
Time Management	28%	73%	**UT > CT = D**
Awareness re Application Process	37%	63%	**UT > CT = D**
Awareness of Services	42%	58%	**UT > CT = D**

Students were asked a series of questions about how they spent their time, including items related to the academic experience (e.g., attending class, preparing for class), co-curricular and social activities, working (on or off-campus), caring for dependents, volunteering and

commuting. The mean ranges, in hours, are presented in Table 4. It was particularly notable that for the item 'Work for pay off campus,' while the mean response was a range of 5-10 hours, 23% of respondents reported working more than 10 hours per week, and of them, 16% worked more than 15 hours per week. With respect to group differences, a clear picture emerged of college transfer students having a more complex set of life responsibilities than did university transfer and direct entry students, as presented in Table 4. College transfer students spent more time working for pay off campus and caring for dependent children and other dependents, whereas direct entry students reported spending more time engaged in typical undergraduate activities such as attending class, co-curricular activities, and relaxing, exercise and social activities.

Table 4. How students use their time

	Mean Range in Hours	**Group Differences**
Attending class	15-20	**D > UT > CT**
Preparing for class	11-15	None
Work for pay on campus	0-5	None
Work for pay off campus	5-10	**CT > UT > D**
Co-curricular activities	0-5	**D > UT = CT**
Relaxing, exercise, social	10-15	**D = UT > CT**
Care of dependent children	0-5	**CT > UT > D**
Care of other dependents	0-5	**CT = UT > D**
Volunteering	0-5	**D = UT > CT**
Commuting	5-10	None

With respect to year-end cumulative grades, university transfer students were found to achieve significantly higher grades (80%) than college transfer (74%) and direct entry students (73%). The finding of no significant difference in grades between direct entry and college transfer students is consistent with the previous Trent University study (Drewes, 2012), which

compared college transfer and direct entry students and found no significant difference in grades. Given insufficient numbers of students entering university through an articulation agreement in the survey response data, the present study was unable to test the previous study's finding that college transfer students entering the university through an articulation agreement performed better than both non-articulation college transfers and university transfer students. Differences in research methodology between the two studies (i.e., survey data versus institutional records), may also explain inconsistencies in findings.

Findings with respect to participation in information and orientation events demonstrated that direct entry students participate to a greater extent in traditional events designed for high school students moving on to university, such as open houses and summer orientation and university preparation events. University and college transfer students reported greater levels of participation in introductory seminar week activities, which tend to be more academic and program specific. See Figure 4. This finding seems to align with the earlier finding that transfer students have more complex life profiles and responsibilities, and as a result, have less time and/or interest to participate in traditional new student orientation activities. Their focus appears to be more strongly on their academic program.

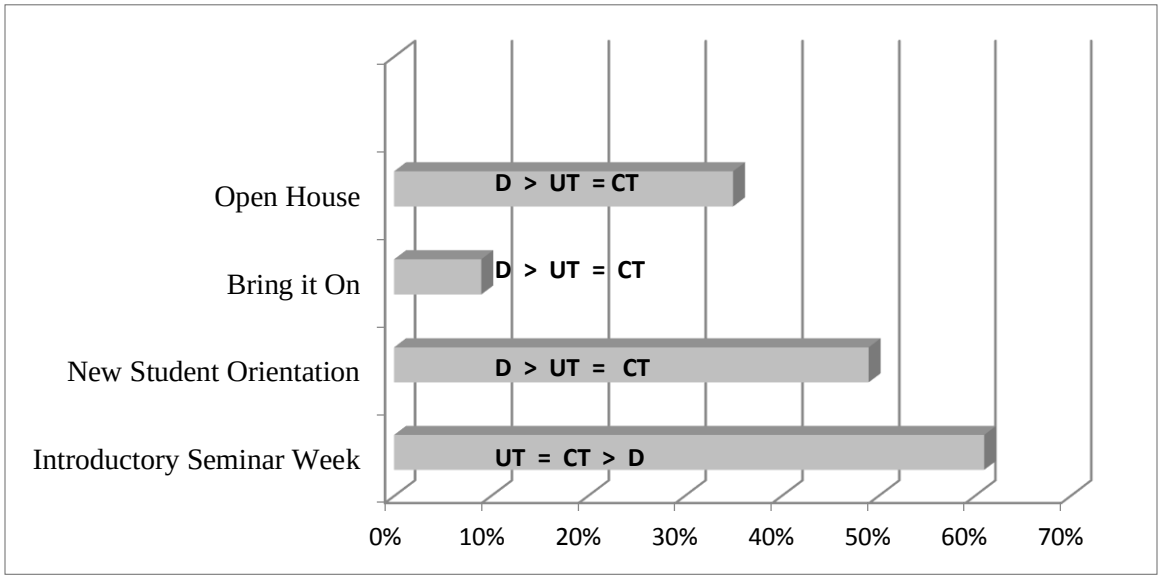

Figure 4. Participation in information and orientation events

Variables of the Academic Resourcefulness Model

Regarding the academic resourcefulness model shown in Figure 1, each of our three student groups, Direct Entry (D), College Transfer (CT) and University Transfer (UT), on average, scored at or above the normative mean on the selected established inventories (see Appendices for group means). Thus, observed student group differences do not signify impoverished skills or beliefs for that particular measure or group. For analyses displayed in Tables 5 to 8, groups were equated for number of university credits earned at the time of the survey.

As shown in Table 5, the findings revealed that the groups were similarly adjusted at university. College and University transfer students, however, were significantly more generally resourceful than Direct Entry students. Although College Transfer and Direct Entry students scored similarly in academic self-efficacy, academic resourcefulness, and final grades, University Transfer students had significantly higher scores on these measures. Appendix 1 provides the means and standard deviations of the groups.

Table 5. Group differences for the major variables of the academic resourcefulness model.

Variable	**Group Differences**
General learned resourcefulness	CT = UT > D
Academic self-efficacy	UT > CT = D
Academic resourcefulness	UT > CT = D
University adjustment	None
Final grade	UT > CT = D

The groups similarly attributed an academic disappointment to the difficulty of the task at hand, and reported receiving similar grades on this task. Direct Entry and College Transfer students, however, endorsed more lack of effort and bad luck attributions than University Transfer students, who, in turn, were more inclined to attribute academic disappoints to not lack of ability, in comparison to the other two groups (see Table 6, and Appendix 2).

Table 6. Group differences for the explanatory style subscales.

Variable	Group Differences
Lack of effort	D = CT > UT
Task difficulty	None
Not lack of ability	UT > CT = D
Bad luck	D = CT > UT
Reported disappointing grade	None

Examining initially only the factors of the original Reasons for Attending University scale by Kennett, Reed, et al. (2013), all groups equally endorsed attending to delay responsibilities and to attain a better job. As shown in Table 7, Direct Entry students were significantly more likely to attend for internal reasons, to please other people, and because of the university features in comparison to the College and University transfer groups. As well, the College Transfer group more highly endorsed the university's features as a reason than the University Transfer group.

Table 7. Group differences for subscales of the Reasons for Attending University Scale.

Variable	Group Differences
Internal reasons	D > CT = UT
Other people	D > UT = CT
University's features	D > CT > UT
Delay responsibilities	None
Attain a better job	None

Significant differences between the groups were observed for the following reasons that were added to the original scale: scholarship opportunities, pathway existed from previous program, secure career change/advancement, could not find a job, University's size, Trent offered me transfer credits (see Table 8, and Appendix 3). As expected, University and College Transfer groups were more likely to be attending university because they couldn't find a job than the Direct Entry group; and the University Transfer followed by the College Transfer were more likely to be offered transfer credits by Trent than the Direct Entry group. Also not surprisingly, scholarship opportunities were greater among the Direct Entry group, followed by the College

Transfer group, and, lastly, the University Transfer group. As well, the College Transfer group was the most likely to be attending university because a pathway existed from a previous program and to secure a career change or advancement, followed by the University Transfer and Direct Entry groups.

Table 8. Group differences for additional items added to the Reasons for Attending University Scale.

Variable	**Group Differences**
Scholarship opportunities	D > CT > UT
Pathway existed from previous program	CT > UT > D
Secure career change/advancement	CT > UT > D
Can't find a job	UT = CT > D
University's size	D > CT = UT
Trent offered me transfer credits	UT > CT > D

Based on past investigations (e.g., Kennett, 1994; Kennett & Keefer, 2006, Kennett et al., 2013), it was expected that the more highly academically resourceful students would be more generally resourceful, have higher academic self-efficacy beliefs, be attending university for more internal reasons and less so to please others and to delay responsibilities, and have an explanatory style that attributes failure to task difficulty and not because of lack of personal effort or ability. Academic resourcefulness was also expected to be a strong and direct predictor of grade performance and university adjustment. These predictions were supported. But more importantly, we wanted to know if the factors predicting academic resourcefulness, adjustment, and grades differed among the groups?

To address the later question, the first set of standard multiple regression analyses considered the common predictors of academic resourceful across the groups. As shown in Table 9, for each of the groups, students who were more efficacious about their academic abilities, more generally resourceful, and attributed academic disappointments more so to bad luck and less to lack of ability or effort were more likely to be academically resourceful, accounting for between 54% and 63% of the total variance. Asterisked in Table 9 are the common unique predictors of academic resourcefulness across the groups. Supporting the existing literature (e.g., Kennett & Keefer, 2006), for each of the groups, higher general learned resourcefulness skills and academic self-efficacy were the direct predictors of academic

resourcefulness. Appendix 5 provides a more formal summary of the regression analysis for each of the groups, highlighting, as well, additional subtle group differences.

Table 9. Predictors of academic resourcefulness.

Variables contributing to the prediction	**Group**	**% Total Variance**
Self-efficacy*	Direct Entry	57%
General Learned Resourcefulness*	College Transfer	63%
Not lack of effort	University Transfer	54%
Not lack of ability		
Bad luck		

Note. * denotes the common direct/unique predictors of academic resourcefulness across the groups.

Table 10 summarizes separately for the groups the standard regression analysis of the variables predicting university adjustment. For each of the groups, students who were more adjusted at university were likely to be more generally and academically resourceful, and academically efficacious, to be attending university for more internal reasons and not to delay responsibilities, and to attribute academic disappointments not to their lack of ability. As well, for each of the groups, academic resourcefulness was the common direct predictor of adjustment. Thus, students who were better able to self-regulate their academic environment by goal setting, problem solving, anticipating consequences and effective time management were more likely to be better adjusted at university. See Appendix 6 for a more detailed summary of the individual groups.

Table 10. Predictors of university adjustment.

Variables contributing to the prediction	**Group**	**% Total Variance**
Self-efficacy	Direct Entry	32%
General Learned Resourcefulness	College Transfer	27%
Academic resourcefulness*	University Transfer	30%
Not lack of ability		
Internal reasons		
Not to delay responsibilities		

Note. * denotes the common direct/unique predictor of university adjustment across the groups.

Previous research has shown that the direct predictors of higher year end grades are higher levels of academic self-efficacy and academic resourcefulness (Kennett, 1994; Kennett & Keefer, 2006; Kennett & Reed, 2009). As illustrated in Table 11, this outcome was observed only for the Direct Entry and College Transfer groups. Only higher academic self-efficacy was a predictor of higher grades for the University Transfer group; nonetheless, academic resourcefulness was a significant indirect predictor of grades for this group. Other indirect/shared predictors of higher year end grades for the individual groups included an attribution style not attributing failure to lack of ability or lack of effort, but more to bad luck. See Appendix 6 for a more detailed summary of the individual groups.

Table 11. Predictors of year end grades.

Variables contributing to the prediction	**Group**	**% Total Variance**
Self-efficacy*	Direct Entry	23%
Academic resourcefulness*[D & CT only]	College Transfer	20%
Not lack of effort	University Transfer	39%
Not lack of ability		
Bad luck		

Note. * denotes the common direct/unique predictors of final grades across the groups.

Limitations

This research does not come without its limitations. First and foremost, the generalizability of the findings needs to be tested. Our sample is based on Trent University students, with institution specific entrance requirements and policies for direct entry and transfer students. Further, the study is situated in the post-secondary education context in Ontario, a system in which the colleges and universities were initially developed to have distinct mandates, and in which a focus on college to university transfer is a more recent development. The student experience in other jurisdictions with more mature or integrated transfer systems may be very different.

Secondly, our initial intent was to single out college transfer students entering through an articulation agreement as Drewes et al. (2012) had in their study. Our small group of CAAT

Transfer and Articulation students, however, did not enable us to compare the performance and psychosocial profile of this group to the other transfer and direct entry student groups.

Thirdly, this and subsequent studies needs to examine the factor structure of the Reasons of Attending University – Revised scale, where 10 items were added to the inventory. Specifically, we need to determine if a subscale, pertinent to transfer students, emerges.

Fourthly, further research may want to refine some of the measurement items. For example, students endorsed, more than anticipated, having the foundational skills for their selected discipline upon entrance.

Fifthly, a question that cannot currently be addressed, but will be in September 2014, is what are the psychosocial factors predicting retention (i.e., students deciding not to return to university in the subsequent year)? With the focus of their study being on reasons for attending higher education, Kennett, Reed, et al. (2013) found that students not planning on returning were more likely to endorse being at university for other people reasons and to delay responsibilities. Kennett and Reed (2009) observed that students deciding not to return to university in their second year had impoverished general or academic skills or both. As well, we need to determine whether retention rates vary between groups for non-graduating students.

Finally, our study did not inquire why students transferred to Trent University. It would be fruitful for subsequent studies to employ qualitative methods via the use of focus groups and one-on-one interviews to explore why students are transferring across postsecondary institutions.

Conclusions

In summary, our findings revealed that college and university transfer students are well prepared for academic success. Multiple regression analyses of the predictors of academic resourcefulness, university adjustment, and final grades, for each of the groups, replicated findings reported in the literature (e.g., Kennett, 1994; Kennett & Keefer, 2006; Kennett, Reed, et al., 2013; Reed et al., 2009). Similar to their direct entry student counterparts, being generally and academically resourceful and efficacious about one's academic abilities is key to success and university adjustment for both college and university transfer students, too. Further, and consistent with recent studies (ONCAT, 2013), our findings debunk the deficits based myth about college transfer students not being prepared for university-level study. We also observed that, in contrast to university transfers and direct entry students who have more discretionary

time, college transfer students spend considerably more time working for pay off campus, and are more responsible for the care of dependents. The practical implications of this study are obvious. Educators and academic administrators need to focus on students' strengths versus perceived weaknesses, and be cognizant of students' differing life profiles. Especially for some college transfer students, scheduled events during the day or evening may be unattainable due to work and family responsibilities. Reaching out in different ways to these and other students having similar circumstances may serve to enhance their participation and experience. For example, our findings suggest that engaging transfer students through academic advising as opposed to traditional orientation events may be fruitful. Finally, our findings suggest that college to university transfer may be a particularly promising pathway to increase male participation in university.

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Appendices

In order to better compare means scores of this study's variables with the normative data presented in the measures section, the tables of Appendices 1 through 4 provide the unadjusted group means and standard deviations. Nonetheless, adjusted means, controlling for number of course credits at the time of survey completion, did not substantially differ from those means reported here, and, thus, including them was deeded as redundant information.

Appendix 1

Unadjusted group means and (standard deviations) for the major variables of the academic resourcefulness model.

Variable	**Direct Entry**	**College Transfer**	**University Transfer**
General learned resourcefulness	12.43 (24.57)	17.96 (25.36)	16.68 (25.43)
Academic self-efficacy	40.26 (7.07)	41.14 (7.17)	43.39 (7.59)
Academic resourcefulness	110.94 (19.18)	112.47 (19.74)	118.56 (20.34)
University adjustment	75.04 (15.42)	73.54 (14.09)	75.21 (13.96)
Final grade	73.48 (10.78)	74.44 (11.48)	79.71 (8.91)

Appendix 2

Unadjusted group means and (standard deviations) for the explanatory style subscales and reported grade for the disappointing academic item.

Variable	**Direct Entry**	**College Transfer**	**University Transfer**
Lack of effort	22.36 (7.86)	21.97 (7.90)	20.01 (8.08)
Task difficulty	20.78 (6.69)	19.63 (6.69)	19.75 (6.88)
Not lack of ability	15.07 (3.97)	15.41 (3.94)	16.74 (3.44)
Bad luck	11.68 (4.12)	11.11 (4.28)	10.34 (4.33)
Reported disappointing grade %	46.09 (28.15)	46.93 (28.93)	52.15 (28.62)

Appendix 3

Unadjusted group means and (standard deviations) for the subscales of the Reasons for Attending University Scale.

Variable	Direct Entry	College Transfer	University Transfer
Internal reasons	58.50 (12.82)	55.61 (15.22)	55.41 (15.22)
Other people	18.20 (6.07)	15.64 (6.09)	16.64 (6.72)
University's features	7.46 (2.59)	7.00 (2.58)	6.44 (2.94)
Delay responsibilities	3.59 (2.36)	3.34 (2.10)	3.15 (2.02)
Attain a better job	9.52 (2.33)	9.45 (2.57)	9.16 (2.76)

Appendix 4

Unadjusted group means and (standard deviations) for additional items added to the Reasons for Attending University Scale.

Variable	Direct Entry	College Transfer	University Transfer
Scholarship opportunities	3.26 (1.91)	2.03 (1.65)	1.86 (1.36)
Pathway existed from previous program	2.04 (1.55)	3.30 (2.16)	2.61 (1.89)
Secure career change/advancement	2.99 (1.92)	4.10 (1.90)	3.65 (2.02)
Can't find a job	1.80 (1.34)	2.44 (1.66)	2.62 (1.76)
University's size	4.13 (1.70)	3.05 (1.84)	2.95 (1.90)
Trent offered me transfer credits	1.25 (0.84)	2.80 (1.95)	3.20 (1.93)

Note. A 6-point Likert scale ranging from 1 (definitely not a central reason) to 6 (definitely a central reason) was used

Appendix 5

Output predicting academic resourcefulness for each of the groups, separately.

Group: Direct Entry (*N* = 743) Dependent Variable: Academic Resourcefulness (ARI) R = .76, R^2 = .57, Unique Variance = .27, Shared Variance = .30			
Independent Variables IV	Bivariate correlations between IV_s with ARI	Semi-partial r	Semi-partial r^2 (unique variance)
Self-efficacy	.68	.42	.18
General resourcefulness	.54	.26	.07
Lack of effort	-.42	-.12	.01
Not lack of ability	.33	non-significant	
Bad luck	-.28	-.07	.005

Note. In addition to academic self-efficacy and general resourcefulness, other unique predictors of ARI was lower lack of effort and bad luck attribution style scores.

Group: College Transfer (*N* = 203) Dependent Variable: Academic Resourcefulness (ARI) R = .79, R^2 = .63, Unique Variance = .30, Shared Variance = .33			
Independent Variables IV	Bivariate correlations between IV_s with ARI	Semi-partial r	Semi-partial r^2 (unique variance)
Self-efficacy	.64	.37	.14
General resourcefulness	.60	.35	.12
Lack of effort	-.46	-.19	.04
Not lack of ability	.30	non-significant	
Bad luck	-.35	non-significant	

Note. In addition to academic self-efficacy and general resourcefulness, another unique predictor of ARI was lower lack of effort attribution style scores.

Group: University Transfer (*N* = 141) Dependent Variable: Academic Resourcefulness (ARI) R = .74, R^2 = .54, Unique Variance = .27, Shared Variance = .27			
Independent Variables IV	Bivariate correlations between IV_s with ARI	Semi-partial r	Semi-partial r^2 (unique variance)
Self-efficacy	.65	.41	.17
General resourcefulness	.46	.32	.10
Lack of effort	-.40	non-significant	
Not lack of ability	.37	non-significant	
Bad luck	-.20	non-significant	

Appendix 6

Output predicting university adjustment for each of the groups, separately.

Group: Direct Entry (*N* = 705) Dependent Variable: University Adjustment (UAQ) R = .57, R^2 = .32, Unique Variance = .09, Shared Variance = .23			
Independent Variables IV	Bivariate correlations between IV_s with UAQ	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.52	.22	.05
Self-efficacy	.41	non-significant	
General resourcefulness	.43	.14	.02
Not lack of ability	.21	non-significant	
Internal reasons	.24	.08	.01
Delay responsibilities	-.25	-.09	.01

Note. In addition to academic resourcefulness, other unique predictors of UAQ was higher general resourcefulness, greater internal reasons and lower delaying responsibility scores for attending university.

Group: College Transfer (*N* = 192) Dependent Variable: University Adjustment (UAQ) R = .51, R^2 = .27, Unique Variance = .06, Shared Variance = .21			
Independent Variables IV	Bivariate correlations between IV_s with UAQ	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.49	.20	.04
Self-efficacy	.35	non-significant	
General resourcefulness	.41	.13	.02
Not lack of ability	.19	non-significant	
Internal reasons	.14	non-significant	
Delay responsibilities	-.18	non-significant	

Note. In addition to academic resourcefulness, another unique predictors of UAQ was higher general resourcefulness.

Group: University Transfer (N = 136) Dependent Variable: University Adjustment (UAQ) R = .55, R^2 = .31, Unique Variance = .11, Shared Variance = .20			
Independent Variables IV	Bivariate correlations between IV_s with UAQ	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.47	.25	.06
Self-efficacy	.33	non-significant	
General resourcefulness	.30	non-significant	
Not lack of ability	.28	non-significant	
Internal reasons	.27	.23	.05
Delay responsibilities	-.19	non-significant	

Note. In addition to academic resourcefulness, another unique predictor of UAQ was higher internal reasons for attending university.

Appendix 7

Output predicting final grades for each of the groups, separately.

Group: Direct Entry (*N* = 736) Dependent Variable: Grades R = .47, R^2 = .23, Unique Variance = .06, Shared Variance = .17			
Independent Variables IV	Bivariate correlations between IV_s with Grades	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.44	.19	.04
Self-efficacy	.41	.12	.01
Lack of effort	-.28	-.07	.005
Not lack of ability	.25	non-significant	
Bad luck	-.15	non-significant	

Note. In addition to academic self-efficacy and academic resourcefulness, another unique predictor of grades was lower lack of effort attribution scores.

Group: College Transfer (*N* = 202) Dependent Variable: Grades R = .45, R^2 = .20, Unique Variance = .05, Shared Variance = .15			
Independent Variables IV	Bivariate correlations between IV_s with Grades	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.42	.19	.04
Self-efficacy	.37	.11	.01*
Lack of effort	-.24	non-significant	
Not lack of ability	.23	non-significant	
Bad luck	-.22	non-significant	

Note. * Academic self-efficacy approached significance at p = .08.

Group: University Transfer (*N* = 140) Dependent Variable: Grades R = .62, R^2 = .39, Unique Variance = .12, Shared Variance = .27			
Independent Variables IV	Bivariate correlations between IV_s with Grades	Semi-partial r	Semi-partial r^2 (unique variance)
Academic resourcefulness	.47	non-significant	
Self-efficacy	.61	.35	.12
Lack of effort	-.32	non-significant	
Not lack of ability	.35	non-significant	
Bad luck	-.23	non-significant	