



# LITERATURE REVIEW

Transfer Student Success at the University of Calgary  
and the Northern Alberta Institute of Technology

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## Overview

This literature review supports two transfer student success studies conducted using data provided by the Northern Alberta Institute of Technology (NAIT) and the University of Calgary (UCalgary) called *Transfer Student Success: A Profile of Transfer Student Success at the Northern Alberta Institute of Technology* and *Transfer Student Success: A Profile of Transfer Student Success at the University of Calgary*. The Alberta Council on Admissions and Transfer (ACAT) provided the funding for these projects. Two research questions informed the research and this literature review, 'Are transfer students successful?' and 'Are they as successful as direct entry students'. In exploring these questions, the study compared the success of transfer versus direct entry students within each institution. Measures used included average grade point averages (GPA), graduation rates, withdrawal rates, and completion timing. These benchmarks were chosen as they are quantifiable and routinely found in the literature and in practice (Tikina, 2017 pg. 4; Heslop, 2004; Lambert-Maberly, 2010; Pendleton, 2010).

Canadian transfer success research is growing in several jurisdictions across the country. Often, it is conducted at the institutional level or by government funded allied organizations such as the British Columbia Council on Admissions and Transfer (BCCAT), the Ontario Council on Articulations and Transfer (ONCAT), the Higher Education Quality Council of Ontario (HEQCO), and others. The opportunity to inform policy development both within institutions and at the system level is well served by these efforts. The benefits of evaluating the comparative success of transfer students include developing an understanding of the effectiveness of an education system, particularly in relation to accessibility, the efficacy of pathways, and the ability of an education system to meet labour market demand through further education which Tikina referred to as 'system-wide measures' of transfer success (2017, p.1).

The research conducted for ACAT, NAIT, and UCalgary ensures an evidence-based understanding of transfer success. The findings may, in turn, inform future research and cast light on the Alberta transfer student experience. The potential for other outcomes exist such as informing policy development that supports greater access into higher education and into the workforce and potentially identifying targeted opportunities for enhancing supports and creating unique curricular arrangements that enable movement between credentials whether with other institutions or with the private and not-for-profit sectors. An example of this would be NAIT's approach to baccalaureate design which emphasizes opportunities for entry into third year for graduates of aligned diploma programs.

## Jurisdictional Overview

Previous research studies informed the performance measures used for the UCalgary and NAIT analyses and offer potential options to continue examining transfer success in Alberta.

The success of transfer students in Canadian universities and colleges has been studied by several postsecondary institutions and postsecondary-affiliated organizations (Pendleton, 2010; Shook, Norman, Guyatt, 2016; Tikina, 2017; Stewart, Martinello, 2012. Wingate, McCartney-Young, Navarro Suarez, 2017; Heslop, 2004; Lambert-Maberly, 2010; Kennett, Maki, 2014; Confederation, 2013). Many different methods and measures have been used in Canada and the US to illustrate the relative progress of transfer students as compared to direct entry students (Tikina, 2017; Xu, Ran, Fink, Jenkins, Dundar, 2017). While this variety renders comparisons challenging, it does offer other models for evaluating performance.

BCCAT is a Canadian leader in the field having studied the transfer mobility and success field for decades. Anna Tikina (2017) in *Transfer Student Performance* (published by BCCAT) provides a comprehensive literature review examining transfer student success. Her report outlines the value of seeking a broader understanding of transfer success and provides specific examples across the research

landscape of studies that have compared transfer students to direct entry students (p. 4). Performance metrics identified in Tikina's work (2017, 2015) such as average grade point averages (GPAs), graduation rates, and total number of credits earned informed some of the choices used for the analyses of NAIT and UCalgary students. The NAIT research attempted to align some of these metrics to those used in other Western Canadian jurisdictions to facilitate inter-provincial benchmarking such as using 19 as the threshold age for distinguishing between direct entry versus transfer students (Tikina, 2015); however, the data sets supported this to a limited extent.

## Transfer Student Definitions

Transfer and direct entry students are defined differently across the literature (Radwin, Horn, 2014; Tikina, 2017). Collins defines a transfer student as "a student who moves from one institution or course to another at the same level (e.g. undergraduate)" (2018). Some institutions use basis of admission as the indicator of status (i.e., if a student is admitted based on high school grades, the individual is a direct entry student, not a transfer student). For example, McGill University notes the following: "Transfer applicants are considered on the basis of university/college work and previous studies" (McGill, 2018). Similarly, the University of British Columbia defines transfer students by their most recent postsecondary studies for admissions (UBC, 2018). Other institutions attach a time element to the status, where high school direct entry status expires beyond a year after graduation from high school. This is similar to the practice at Mount Saint Vincent University (MSVU) in Halifax. If a student's high school grade average, upon graduation, is too low for admission to MSVU or they are lacking course requirements for admission, they may apply for admission to MSVU three years after their high school graduation, under yet another basis of admission called "Mature" (MSVU, 2018). Still others define transfer students in a manner that is consistent with the Collins definition and exclude high school students who enter with transfer credit (Mickelson, Laugerman, 2011). Research focus also determines transfer definitions such as including only those transfer students who have moved from a college to a university once and have no other exposure to post-secondary level studies (Xu, Ran, Fink, Jenkins, Dundar, 2017). In this instance, those who attended more than two institutions are excluded. The distinction made in practices is that transfer can happen from a credential at one level (e.g. college diploma) to another credential at a more advanced level (e.g. bachelor's degree).

The NAIT and UCalgary analysis highlighted the different ways institutions define transfer students. In the case of NAIT, the researchers found that transfer students included any student with post-secondary exposure whether gained at a post-secondary institution or through non-formal workplace learning. Some of the latter students participated in partnerships with private or not-for-profit organizations (e.g., ENRON, Saint John's Ambulance, etc.). Direct entry students were those who had been admitted based on their high school prerequisite results and included students of all ages. For UCalgary, direct entry students were defined as those who had entered directly from high school and excluded mature students. Transfer students included those who had studied previously at recognized post-secondary institutions. The researchers intentionally defined the cohorts in keeping with each institution's context when making the comparisons between transfer and direct entry students given the local policies and procedures defining and influencing success.

## Typical Student Success Measures for Transfer

Studies show varying results regarding the comparative success of transfer students; the variance seems to reflect the differing ways that researchers choose to define and measure 'success' (see Table 1 for examples).

Some studies address behaviour related to persistence, such as resourcefulness or preparation (Kennett, Maki, 2014). This approach is very interesting as it aligns to approaches in student development theory and learning outcomes focused research (Lizzio, Wilson, Simons, 2012). Others focus on quantifiable factors such as grade point average at a point in time and graduation rate (Tikina, 2017 pg. 4; Heslop, 2004; Lambert-Maberly, 2010; Pendleton, 2010). Student satisfaction represents another widely used measure of transfer success (Davis, 2017; BCCAT, 2012). Indeed, the Alberta Graduate Outcomes Survey is a useful tool for understanding whether students believe they are receiving fair credit recognition for prior post-secondary studies (Davis, 2017, pp. 109-111).

Still others suggested pathway program structure supported by systematic articulation agreements appear to enable transfer student success (Kennett, Maki, 2014). Maki and Kennett (2014) found:

“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.”

For the NAIT and UCalgary studies, information was not available on the nature of prior post-secondary studies beyond defining whether someone attended a college, institute, or university. Having noted this, the researchers found high rates of success among returning students who laddered their NAIT credentials into degree programs, suggesting forms of coordinated curricular structures (albeit within one institution) contribute to the success of transfer students. In addition, the NAIT degree programs attracted a significant number of transfer students (beyond 60% in any of the cohorts examined). While further study is needed to understand the value of these structures for transfer, there do appear to be indications they facilitate transfer student success.

Several studies compared the success of transfer students to direct entry students although not all agree with this approach. For example, Lambert-Maberly (2010) suggested comparing transfer students' first year university performance to that of high school direct entry students' first year isn't valid and indicated this is because high school students have typically never experienced post-secondary studies. According to Lambert-Maberly, research indicates that direct entry grades drop dramatically in first year, whereas transfer student grades drop slightly (2010). The NAIT and UCalgary findings present alternative findings – both cohorts' grades dropped in first year but not necessarily dramatically.

Given the wide range of options for defining transfer students and transfer success, articulating the comparative control groups and success systematically and consistently, and allowing for both empirical analysis and qualitative feedback from students, would be helpful. It is, however, a challenge to do so when considering the uniqueness of institutional context. For the NAIT and UCalgary analyses, the researchers chose to define success very narrowly in keeping with the quantitative nature of the study. If students (transfer or direct entry) achieved average GPAs of 2.00, graduated, or left their institutions in good standing (i.e., with a 2.00), they were deemed successful. The type of transfer student at NAIT is very different than at UCalgary as are the types of credentials, policies, and approaches for transfer. These findings suggest subsequent research at the institutional and system levels would be well advised to embrace the diversity that exists and develop measures that facilitate its preservation to the extent possible. In the final analysis, the quantitative analyses of NAIT and UCalgary student data should be considered initial forays as more research is needed.

## Final Thoughts

A range of approaches exist to evaluate the success of transfer students. This research used an empirical approach given the mandate for the two studies and the need for a practical model that could be used as a point of reference for framing the research. Nonetheless, there are many factors that influence the performance of students and broader studies would be well served by considering more wide-ranging factors to build on this initial research.

Table 1: Transfer Student Success Measures - Examples from the Literature

Study	Measures
Alberta Graduate Outcomes Survey Class of 2013/2014 Publicly-Funded Institutions Report February 2017	Student satisfaction Employment Proportion who received transfer credit toward program of graduation in 2013/14
<i>Tikina - Transfer Student Performance: Approaches to measuring transfer student performance.</i>	System wide measures (e.g., access to education; labour market demand) Institutional measures (GPA, graduation rate, retention, progression, time to graduation) Student-specific, non-academic measures (save money, career goals, etc.)
<i>Heslop - Alternate Paths to SFU: A Comparative Academic Performance Study of BC College Transfer Students and BC Direct Entry Secondary School Students Admitted to SFU from 1992 to 1999</i>	High school average Cumulative GPA – first 30 credits Cumulative GPA final 60 credits Time to completion Graduation rate Grades Failure rate
<i>Pendleton - Credits to Graduation: A Comparison of Transfer Graduates and Secondary School Graduates at BC Research Universities</i>	Credits awarded Credits earned GPA
<i>Kennett &amp; Maki Academic Resourcefulness and Transfer Student Success: Direct Entry, College Transfer, and University Transfer Student Comparisons.</i>	Model of academic resourcefulness inventory Self-control schedule Resourcefulness Positivity Problem-solving Delayed gratification Engagement in self-change
<i>Lambert-Maberly - Profile of BC College Transfer Students 2003/04 to 2007/08 (a summary of 5 reports)</i>	GPA at completion (compared to admission) Graduation rate Amount of credit awarded

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