



TRANSFER STUDENT SUCCESS

A Profile of Transfer Student Success at the
Northern Alberta Institute of Technology
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Executive Summary

This report summarizes the findings from a transfer student success research study conducted with the financial support of the Alberta Council on Admissions and Transfer (ACAT) and the institutional support of the Northern Alberta Institute of Technology (NAIT). Two other studies serve as standalone companion pieces to this report: *“Transfer Student Success, A Profile of Transfer Student Success at the University of Calgary”* and *“A Literature Review: Transfer Student Success at the University of Calgary and the Northern Alberta Institute of Technology”*. The two research studies represent separate case analyses of two very different institutions; therefore, direct comparisons of the data are not advisable.

The NAIT research examined two primary questions, ‘How successful are transfer students at NAIT?’ and ‘Are transfer students successful in comparison to direct entry students at NAIT?’ For the purposes of this study, definitions of success included evidence that transfer students achieved average grade point averages (GPAs) of 2.00 or higher at end of year one; that they graduated; or that they finished studies at NAIT with average grade point averages of 2.00 or higher (i.e., left in good standing at last point of registration). The analysis also included comparing withdrawal, graduation and completion rates.

To examine these questions, the researchers identified two primary control groups across three Fall admission cohorts (Fall 2008-09, Fall 2009-10, and Fall 2010-11) for which NAIT provided at least six years of anonymized student enrolment data.

- Cohort 1 – refers to transfer students who were admitted to NAIT diploma, degree, and applied degree programs and who had studied at a previous post-secondary institution. This group also included those who had earned post-secondary level credits because of approved non-formal workplace learning which may have resulted from partnerships with and/or recognition of studies from organizations maintaining relationships with NAIT’s Corporate and International Training.
- Cohort 2 – refers to direct entry students who were admitted to NAIT diploma, degree, and applied degree programs based on prior high school results and who had no previous post-secondary level experience.

Students who began in a Fall cohort in one program and who subsequently transferred to another program at NAIT were included in the study. All other students were excluded from the study (e.g., students who had enrolled in NAIT’s continuing education, apprenticeship, and certificate programs; those who started in other entry points). Therefore, it would be problematic to extrapolate the findings to represent the entirety of the NAIT student body.

The research approach began with establishing an understanding of NAIT’s overall institutional context and its admissions, grading, and graduation policies. NAIT experienced significant academic restructuring during the years covered in this study. The School of Applied Science and Technology enrolled the largest number of students in each Fall cohort; however, it was most impacted by the restructuring exercise. The next two schools with the largest enrolments were the JR Shaw School of Business (Business) and Health and Life Sciences (Health). These two schools only experienced name changes during the periods covered by the study; therefore, they were the focus of the school specific analyses. Their enrolments ranged from 48% to 50% in any of the Fall cohorts examined.

NAIT uses a specific grading approach; therefore, it became necessary to consult with registrarial leadership to capture a deeper understanding of the policy context. As an example, NAIT uses a 4.00 grading scale supported by a specific institutional approach for calculating grade point averages.

Students receive end-of-term results rather than cumulative first year averages. To support the project, the registrarial staff calculated an end-of-first-year cumulative grade point average for each student; this calculation was based on the grades and courses achieved in first and second term and weighted according to the number of credits per course.

The researchers consulted with NAIT regarding the appropriate data fields to use for the study. Examples of data fields examined included gender, age, date of entry, admit school, admit program, grade point averages (GPAs) at the end of year one and at last point of registration/graduation, academic standing at last point of registration, and date of graduation. Appendix A provides a full list. Prior to passing the data sets to the researchers, NAIT masked the personal identifying data for each student to preserve student privacy and anonymity in accordance with Alberta privacy regulations.

The methodology for this study involved a quantitative analysis of the student data for each of the Fall cohorts to facilitate comparisons between transfer and direct entry students. Metrics used to analyze success and to compare the cohorts included average GPAs, graduation rates, and completion rates. These served as the primary indicators of success both overall and for the two schools – Business and Health.

The data revealed a transfer student profile(s) for NAIT informed by specific metrics each of which facilitated further comparisons. These included enrolment size and status, age, gender, citizenship, types of prior post-secondary experiences, and the amount of transfer credit awarded. To extend the analysis of success, completion and graduation rates were explored across other dimensions such as gender and source of prior post-secondary studies. Where possible, the transfer data were analyzed according to credential type (i.e., degree, diploma) and compared to the direct entry student cohort. Throughout this report, the percentages in the Figures were rounded up or down as appropriate; therefore, the data do not always add up to 100%.

Overall, NAIT transfer students were typically older than direct entry students and predominantly male. In contrast, Business and Health diploma transfer students at NAIT were predominantly female, revealing a secondary transfer student profile that demonstrated the variance between the different schools. Most of the transfer students were Canadian citizens although they were proportionally more diverse than direct entry students in that a small portion of each class came to NAIT having studied in other provinces or internationally. The transfer cohort included a subset of students who returned to NAIT for additional studies. MacEwan University and the University of Alberta represented the top sending Alberta institutions for transfer students who had studied outside of NAIT.

The evidence indicates transfer students' performance often met or exceeded that of direct entry students. Furthermore, they usually completed their programs within 3 years. While there were students in both the transfer and direct entry cohorts whose grades fell below 2.00, both groups successfully achieved average GPAs beyond that level. At times, NAIT transfer students' average GPA performance exceeded direct entry students.

Tables 1 and 2 provide examples of the metrics and dimensions used for this study to explore the success of transfer students versus direct entry students. In all cases, these metrics individually and collectively represent examples of ways to extend the provincial research on transfer student success and establish baseline data to inform an understanding of this cohort. For example, identifying the transfer profiles across the system using gender, age, enrolment, citizenship, source of prior post-

secondary studies, etc. would be very useful to institutions across the province and to government to help inform policy development and student supports. Conducting studies of other institutions across Alberta using these and other quantitative and qualitative metrics would enhance an understanding of whether these findings are typical in the Alberta context. It would also allow both institutions and the province to begin to benchmark transfer student success against other jurisdictions beyond provincial borders. At the institutional level, future research is suggested such as surveying students and examining other inputs including admit averages and personal circumstances to determine other quantitative and qualitative factors influencing the transfer student experience.

Institutional context and credential variety represent important considerations in student success research. Amalgamating all institutions into one group may mask important differences. Furthermore, any future research at institutional or provincial levels will need to consider the potential for variations at the credential and school level and, if volumes allow, at the program level. Future research at the provincial level will want to consider institutional type and the complexity of credentials, programs, policies, and practices when examining transfer student success to ensure the research process and findings reflect the diversity and complexity in the province.

Table 1: High-Level Overview of Findings – Establishing a Transfer Profile

Metrics	Findings and Future Research Opportunities – Establishing Transfer Profiles
Enrolment Size and Status (Full-time, Part-time)	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • The direct entry cohort was larger than the transfer cohort in each Fall cohort examined. • The transfer cohort increased and captured a larger share of the overall enrolment in later Fall cohorts. • More transfer students increasingly enrolled on a part-time basis within the Fall 2010-11 cohort exceeding the direct entry part-time class in absolute values. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • Potential exists to validate if this is occurring across the province.
Age	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • Most transfer and direct entry students were 21 years or older at the point of entry with the transfer cohort consisting of slightly older students. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • Establishing the typical age profile of transfer students across the province would be helpful to inform an understanding of the student context for policy development.
Gender	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • Overall, more males versus females were enrolled in both the direct entry and transfer cohorts. • However, school specific gender differences exist (i.e., Business and Health enrolled a higher percentage of females). <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • As with age, this finding would be helpful to benchmark against other institutions to inform policy development.

Table 2: Findings and Sample Areas for Future Research across Different Success Dimensions

Metrics	Findings and Future Research Opportunities – Exploring the Dimension of Success
Graduation Rates	<p>NAIT Findings:</p> <ul style="list-style-type: none"> Transfer students in degrees and diplomas graduated at higher rates versus direct entry students. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> Potential exists to validate if this is occurring across the province to inform institutional and system level policy development.
Source of Prior Post-Secondary	<p>NAIT Findings:</p> <ul style="list-style-type: none"> A subset of the NAIT transfer student cohort previously attended a college or institute with university following as the second largest sending institution type. A subgroup of transfer students, particularly in later years, attended NAIT prior to the years covered by this study. A small subset of transfer students attended more than one post-secondary institution prior to entering NAIT. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> Examining sending and receiving institutions represents a potential area of future research to better understand the overall student movement in the province; however, institutional practices for capturing prior institutional information may not be consistent or available within student information systems. Doing so will require resources for institutions and data standards to be agreed upon to facilitate the data collection and analysis process.
Gender and Graduation Rates	<p>NAIT Findings:</p> <ul style="list-style-type: none"> Female transfer students graduated with diplomas at a higher rate versus female direct entry students in every Fall cohort. Variations existed at the school level although transfer females still graduated at a higher level. Male transfer diploma students graduated at a higher rate versus direct entry male students. Overall, males tended to have proportionally lower graduation rates than females for both transfer and direct entry students. Fluctuations existed at the school level although male transfer graduation rates versus direct entry male rates remained at a proportionally higher level except for one Fall cohort group. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> Examining the circumstances of males more closely would be helpful future research both at the institutional and provincial level to determine if a larger percentage are not graduating. If further research validates the NAIT findings, the higher success of transfer males might lend insights to inform policy development and supports for direct entry males.
Completion Rates	<p>NAIT Findings:</p> <ul style="list-style-type: none"> Most transfer and direct entry students for both degrees and diplomas graduated within three years and successfully achieved completion. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> An opportunity exists to validate if this is occurring across the province and to examine what types of curricular structures facilitate transfer student success. NAIT’s approach for its degree programs appears to serve as a model.
Withdrawal Rates	<p>NAIT Findings:</p> <ul style="list-style-type: none"> NAIT transfer students pursuing degrees withdrew at a proportionally lower rate than NAIT direct entry students. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> The potential exists to validate if this is occurring across the province or if NAIT, a polytechnic, experiences unique outcomes in this area. Further potential exists to identify which curricular structures, if any might facilitate transfer completion.

Metrics	Findings and Future Research Opportunities – Exploring the Dimension of Success
<p>Number of prior post-secondary institutions attended</p>	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • Proportionally more diploma students studied in more than one institution prior to attending NAIT. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • This represents an area for institutional and province wide research to examine students who attend more than one post-secondary institution as a distinct transfer group with potentially different experiences and needs from those that transfer only once.
<p>Evidence of transfer credit awarded overall</p>	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • NAIT awarded approximately half a term of course specific transfer credit. In addition, for its degree programs, it employs a block transfer model such that those with completed diploma programs enter directly into third year of the degree programs. A significant proportion of the degree/applied degree enrolment in the cohorts examined was attributable to returning NAIT students suggesting the success of these curricular models. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • As mentioned previously, the potential exists to examine curricular structures for degrees and applied degrees in the province to determine their potential for laddering students between credentials.
<p>Evidence of transfer credit awarded for non-formal workplace learning</p>	<p>NAIT Findings:</p> <ul style="list-style-type: none"> • NAIT admitted a small number of students who received transfer credit for non-formal workplace training. While the ‘n’ counts were small, this group would benefit from future research to inform an understanding of success related to partnerships with the private and not-for-profit sectors. <p>Future Research Opportunity:</p> <ul style="list-style-type: none"> • The potential exists for future institutional and system wide research to identify ways to partner with industry to develop and recognize other forms of prior learning.

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Northern Alberta Institute of Technology

Institutional Background

NAIT is a polytechnic institution located in Edmonton, Alberta, offering applied education and technical training to support workforce preparedness.¹ NAIT aims to deliver to students a positive learning experience that considers the full range of mental, emotional and physical well-being, all with a focus on providing career ready training.² NAIT awards certificates, diplomas, degrees, and applied degrees across more than 120 programs offered through four schools including the JR Shaw School of Business, the School of Health and Life Sciences, the School of Skilled Trades, and the School of Applied Sciences and Technology, and two departments (Continuing Education, Corporate and International Training). NAIT offers these credentials in the areas of business, health and life sciences, engineering technologies, construction, environment and natural resources, trades and apprenticeships, computers and information technology, hospitality and culinary arts, design and communications, upgrading, and English as a Second Language training.³

Specific credentials awarded include three applied degrees, three baccalaureate degrees, 18 certificates, and more than 60 diploma programs.⁴ The institution enrolls 16,000 students in credit programs and 14,500 in non-credit programs, and registers 12,000 apprentices in apprenticeship training across 34 registered trades programs.⁵ Given all this diversity, this research focused on the diplomas, degrees and applied degrees as the goal was to study a cohort of students that spent a significant degree of time in a credit bearing program at NAIT.

Grading and Course/Credit Characteristics

NAIT's Grading System follows a 4-point scale (Table 3).⁶ Currently, NAIT students are required to achieve a 2.0 to graduate with a degree or applied degree in addition to fulfilling any program specific and academic residency requirements;⁷ however, when grades fall between 1.0 and 2.0, they are granted eligibility to proceed. For diplomas, students can graduate with a 1.0, a standard that is moving to 2.0 in July 2018 (personal communications, April 2018). During the time impacting the cohorts examined for this study, NAIT diploma students graduated with GPAs of 1.0 and higher, and degree and applied degree students graduated with GPAs 2.0 and higher.

Table 3: NAIT's Grading System

Percentage	Letter Grade	Grade Point	Descriptor
90–100	A+	4.0	Outstanding
83–89	A	4.0	
80–82	A-	3.7	Excellent
77–79	B+	3.3	
73–76	B	3.0	
70–72	B-	2.7	Good
67–69	C+	2.3	
63–66	C	2.0	Satisfactory*
60–62	C-	1.7	
55–59	D+	1.3	
50–54	D	1.0	Marginal
0–49	F	0.0	Fail
0	WF	0.0	Withdraw Fail

¹ A NAIT Education Creates Opportunities, <http://www.nait.ca/44315.htm>

² Overview, Vision, and Promises, <http://www.nait.ca/44322.htm>

³ For a full list see

<http://www.nait.ca/programsandcourses.htm?searchType=program&PCCredential=Y%2CDiploma%2CDegree%2CCertificate%20-%20Credit>

⁴<http://www.nait.ca/programsandcourses.htm?searchType=program&PCCredential=Y%2CDiploma%2CDegree%2CCertificate%20-%20Credit&txtSearch=%20>

⁵ <http://www.nait.ca/50198.htm>

⁶ For full details on NAIT's grading scale and related procedures: <http://www.nait.ca/91989.htm>

⁷ For further information on NAIT's graduation requirements: <http://www.nait.ca/102304.htm>

For this study, 2.0 was used to indicate success for both degrees and diplomas when examining average GPAs.

NAIT calculates grade point averages at the end of each term and a final cumulative average for each student when they graduate or exit. Students are not provided a cumulative grade point average on a yearly basis. To facilitate this study, NAIT registrarial staff calculated and provided a cumulative GPA at the end of year one for terms one and two for each student which considered the number and weight of courses completed. In addition, NAIT provided the cumulative GPA data at the last point of registration, including at graduation.

NAIT awards transfer credit at the course level.⁸ Courses are assigned 3- or 6- credits in degree and applied degree programs and 3-, 4.5-, and 6- credits in diploma programs. Degrees take a minimum of two years to complete as those with aligned diplomas are assigned block credit and admitted into the third year. The report provides more details regarding this curricular model at a later point. Diplomas at NAIT typically take two years to complete for a total of 60 credits.

Research Approach

Methodology

The methodology for this study involved an analysis of NAIT student data over three Fall cohorts (Fall 2008-09, Fall 2009-10, and Fall 2010-11). The data set included six years of transfer and direct entry student data for each Fall entering class and excluded other entering classes (e.g., January, May). The quantitative analysis of the data for each of the success metrics involved the following:

- Average GPA calculation: for each cohort examined (i.e., transfer versus direct entry), the average GPAs were calculated at two points – at the end of first year (using the end-of-first-year cumulative GPA for each student provided by NAIT) and at the point of last registration or graduation (using the overall cumulative GPA calculated at the last point of registration or graduation). Two sets of calculations occurred – average GPAs for all students with grades regardless of exit reason and average GPAs for only those that graduated. Students without grades (i.e., 'blank') were not included as the reasons for the lack of a grade could have been due to auditing courses, taking courses on a Pass/Fail basis, or withdrawing prior to the official course withdrawal date. For each calculation, the average GPA was derived by totaling up the number of GPAs in the respective cohort and dividing the sum by the total number of students in that cohort.
- Completion Timing: for these calculations, the number of students that completed within three years, between three and six years, and beyond six years were calculated for each Fall cohort beginning with their respective entry point.
- Graduation rates: calculating graduation rates was based on the total who graduated divided by the total number of students initially registered in the Fall cohort for each of the transfer and direct entry student cohorts.

Prior to passing the data sets for each Fall cohort to the researchers, NAIT masked the personal identifying data for each student to preserve student privacy and anonymity in accordance with Alberta privacy regulations. Appendix A summarizes the student data fields along with associated definitions that undergirded the NAIT analyses.

⁸ Transfer Credit. <http://www.nait.ca/86618.htm>

NAIT registrarial staff supported this research by managing the Research Ethics Board approval process and providing information and interpretations regarding institutional context and coding structure for data in the student information system. Prior to passing the data sets to the researchers, NAIT masked the personal identifying data for each student to preserve student privacy and anonymity in accordance with Alberta privacy regulations. The staff also analyzed the data to ensure that the correct cohorts of students were provided to the researchers and calculated the end-of-first-year cumulative GPAs for each student. These exercises involved a great deal of effort on the part of NAIT staff.

To facilitate Ethics Board approval, NAIT coordinated with the University of Calgary (UCalgary) and the researchers. The rationale for this approach was to support both this study and a separate UCalgary study called '*Transfer Student Success: A Profile of Transfer Student Success at the University of Calgary*'. As with the NAIT study, the UCalgary research was completed with the support of ACAT funding. The two institutions' results are contained in distinct reports and will not be compared to one another given their very different contexts. Furthermore, these two ACAT projects were not intended to result in a comparative analysis between institutions but rather provide case studies of two different institutions using metrics relevant to transfer student success.

Considerations and Limitations

This study analyzed fall admits only; therefore, the findings should not be extrapolated to reflect average GPAs, graduation and completion rates for the entirety of NAIT as it did not include the entire student population. For example, the study excluded January and May admits, certificates, and students that transferred in or out of NAIT in the subsequent years for each Fall cohort. This intentional approach facilitated identifying specific control groups for both transfer and direct entry students to support the research study. A proportion of these fall admits changed programs while studying at NAIT; however, the data set did not include any new students that move into these programs if they had started at a different time other than September for each of the Fall cohorts (i.e., Fall 2008/09, Fall 2009-10, or Fall 2010-11).

The prior institutional analysis did not assess the merits of the source of transfer or the sending institution as, like other institutions, NAIT assesses and awards credit for prior learning experiences in accordance with local institutional policies. The Institute's unique approach presented an initial opportunity to explore situations where NAIT provided credit for non-formal workplace learning resulting from unique partnerships with the private and not-for-profit sectors. For the subset analysis examining students who had studied at more than one institution, the researchers lacked information regarding which specific study experiences contributed to the transfer credit awarded. The practice of assigning transfer at the course level in the student information system further constrained the credit analysis.

As mentioned, the data set did not include grade point averages (GPAs) for every student in certain circumstances (i.e., when students audited courses, took Pass/Fail courses, or withdrew in a term prior to the official drop date). For the average GPA analyses, the researchers examined a subset of the population in each of the Fall cohorts where students presented grades both at the end of year one and at the last point of registration/graduation and adjusted 'n' counts as appropriate.

NAIT experienced significant academic restructuring during the years covered by this study. The most impacted was the School of Applied Science and Technology. Therefore, school specific analyses in

Appendix C focused primarily on the JR Shaw School of Business and the School of Health and Life Sciences.

Throughout this report, the percentages in the Figures were rounded up or down as appropriate. Therefore, the data do not always add up to 100%.

Definitions Used in the Study

Average GPA: refers to a calculated average used in this study to establish evidence of performance success. It is based on the number of students in a cohort and specific grade point average calculations for each student weighted according to courses pursued. Only those students with GPAs were included in these analyses.

Direct Entry Student Cohort: refers to students that were admitted to the institution based on prior secondary school studies as the basis of admission. For NAIT, that includes any student who entered the institution after successfully demonstrating achievement in prerequisite preparation at the high school level without evidence of studies taken at a prior post-secondary institution or within a recognized workplace learning experience. This included mature students and covered the undergraduate entering class for three Fall cohorts to diploma, degree, and applied degree programs only.

Fall Cohort Group: refers to one of the three groups of student candidates included in this study; namely, Fall 2008-09, Fall 2009-10, and Fall 2010-11.

Full-time: refers to students enrolled in nine credits or more per term.⁹

Grade Point Average (GPA): refers to the average of all grades a student received for completing an array of courses at the institution in a given term(s) and weighted according to credit value. For this study, NAIT provided averages for the end of first year and at the last point of registration/graduation, which were calculated and weighted based on the number of credits completed by each student.

Non-Formal Workplace Learning: refers to learning acquired in structured programs outside of formal educational institutions that does not usually lead to a recognized academic credential, although sometimes may result in transfer credit being assigned because of partnerships between institutions and non-profit, government, or corporate organizations.¹⁰ Typically, this form of learning is accessed in or through the workplace setting.

Part-Time Student: refers to students in a program registered in less than nine credits each term.

Six Sector Model: The Alberta system categorizes institutions according to a six sector model which includes the Comprehensive Academic and Research Institutes, Baccalaureate and Applied Studies Institutions, Polytechnical Institutions of which NAIT is a member, Comprehensive Community Institutions, Independent Academic Institutions, and Specialized Arts and Culture Institutions.¹¹

Successful Student: success in the context of this study refers to a student that achieved any of the following:

⁹ [http://www.nait.ca/docs/Academic_Regulations\(1\).pdf](http://www.nait.ca/docs/Academic_Regulations(1).pdf)

¹⁰ Adapted from the ARUCC Transcript and Transfer Guide (Duklas et al). (2015). Transfer Glossary Search: Non-formal learning. Association of Registrars from the Universities and Colleges of Canada and the Pan-Canadian Consortium on Admissions and Transfer. Retrieved from guide.pccat.arucc.ca

¹¹ <http://advancededucation.alberta.ca/post-secondary/institutions/public/types/>

- Cumulative 2.00 GPA
 - Specifically, the students were considered successful if they provided demonstrable evidence of academic achievement in a credit bearing program by having a grade point average that qualifies them for graduation at either the point of graduation or at last point of registration.
 - To accommodate NAIT's context for grading practices, the end of first year average included results for courses/credits taken within terms running from September to April in each cohort year. The cumulative average of all courses taken up to the last point of registration informed the analyses for end of year standing at the last point of registration/graduation.
- Graduation
 - As graduation criteria and expected overall grade point average can sometimes vary by program and credential, confirmation of graduation was considered an indicator of success for this study as a transfer student (or a high school student) met the expected outcomes to receive a credential.
 - When using this criterion, GPA results were ignored to accommodate NAIT's policies in place at the time of the study.
- In Good Standing (or 'Eligible to Graduate')
 - Any student whose last term GPA was 2.00 and higher, and who was not on academic probation, was considered successful. Those on academic probation were not included in this category.

Transfer Credit: refers to courses completed at other post-secondary institutions or credit awarded for workplace training initiatives that NAIT accepted for credit towards a diploma, degree or applied degree program.

Transfer Student Cohort: represents anyone that previously attended any post-secondary institution or participated in an approved workplace training program for which NAIT provided transfer credit. The study included the undergraduate entering transfer student class for three Fall cohorts to diploma, degree, and applied degree programs only; post-secondary undergraduate transfer students with and without transfer credit were included. This cohort also included transfer students who entered NAIT in one program and may have subsequently transferred into another program at NAIT. The cohort group was further refined as select programs were excluded in the study (e.g., continuing studies, certificate programs, English as a Second Language, and upgrading).

Unsuccessful Student: refers to any student that did not achieve a 2.00 or was ineligible for any reason to graduate (e.g., required to withdraw).

Overall NAIT Student Cohort Profile

Credit versus Non-Credit Students

NAIT categorizes its students as follows: those who enrol in any NAIT program or course leading to a credit bearing diploma, applied degree, or degree (called a “Credit Student” in NAIT policy) and those who enrol in a non-credit program or course offered through NAIT’s Corporate International and Continuing Education department (called a “Non-Credit Student”).¹² This same context existed during the years covered in this study.

NAIT non-credit students were not included in this study, although a future research opportunity exists to study those that have transitioned from a continuing education program or course to a credit bearing program. It is worth noting that it may be challenging for institutions to provide this type of data set if it is not already housed within student information systems.

The Research Data Set

The NAIT data set examined for this study included a subset of the student population pursuing credit bearing studies in diplomas, degrees, or applied degrees in one of three Fall cohorts: 2008-09, 2009-10, and 2010-11. This proved helpful for establishing trend analysis and ensured sufficient passage of time for students to complete their programs.

Direct entry and transfer students who studied previously at high schools or institutions within and outside of Alberta were included in the data set. The analysis excluded all other students (i.e., apprenticeship, certificate students, and non-credit). The rationale for excluding these students stemmed from a desire to study a group of students enrolled in a credit-bearing program for more than one year to ensure they had spent a significant amount of time at NAIT.

The data set did not distinguish between those who studied at an in-province versus out-of-province high school, limiting the capacity to conduct research focusing solely on those with previous exposure to the Alberta system. The transfer student data contained interesting information regarding the types of post-secondary institutions attended prior to NAIT. For example, a subset of the students studied previously in another program at NAIT and represented returning students seeking a second and/or credit bearing credential.

The analyses compared two broad student cohorts called Direct Entry and Transfer (Table 4). As the data indicate, students were primarily pursuing diplomas although degree program enrolments increased over the span of the study.

1. ‘Direct Entry Cohort’

This cohort included any students admitted based on prior high school results who had no post-secondary exposure prior to attending NAIT. Given the institution’s historical approach to coding student records, it was not possible to identify where the students attended high school (i.e., within or outside of Alberta).

Two students received transfer credit in one Fall cohort group (i.e., 2 in 2010-11) for studies taken through International Baccalaureate and Advanced Placement programs. These students were included in this cohort.¹³

¹² [http://www.nait.ca/docs/Academic_Regulations\(1\).pdf](http://www.nait.ca/docs/Academic_Regulations(1).pdf)

¹³ In Alberta, dual credit is specifically defined as “programming that is authorized and funded by Alberta Education in which grade 10, 11, or 12 students can earn both high school credits and credits that count toward a post-

2. Transfer Cohort

The 'Transfer Cohort' included transfer students who studied at any post-secondary institution (whether in or out of province) and/or earned credits for non-formal workplace learning. Several sub-cohorts existed within this group, each of which provides insights on alternative approaches to exploring success. Examples include those who attended an Alberta college and/or university, pursued non-formal learning available via the workplace or a regulatory body¹⁴, or studied at a non-Alberta post-secondary institution plus an Alberta post-secondary institution, or a non-Alberta institution(s) only.

A subset of this cohort attended NAIT previously and subsequently returned during the years of the study. The analyses explored this group of students in more detail.

Table 4: NAIT Cohorts included in Study (Full-time, Part-time; by Credential)

	Cohorts	Fall 2008-09			Fall 2009-10			Fall 2010-11		
		Full-time	Part-time	Totals	Full-time	Part-time	Totals	Full-time	Part-time	Totals
Direct Entry Students	Applied Degree	87	4	91	90	2	92	71	4	75
	Degree	47	NA	47	46	22	68	47	3	50
	Diploma	2092	13	2105	2025	12	2037	2161	14	2175
	Total Direct Entry Students	2226 (90%)	17 (63%)	2243 (90%)	2161 (84%)	36 (57%)	2197 (83%)	2197 (83%)	21 (24%)	2300 (83%)
Transfer Students	Applied Degree	5	1	6	12	NA	12	9	1	10
	Degree	7	NA	7	146	17	163	180	54	234
	Diploma	241	9	250	267	10	277	219	11	230
	Total Transfer Students	253 (10%)	10 (37%)	263 (10%)	425 (16%)	27 (43%)	452 (17%)	408 (15%)	66 (76%)	474 (17%)
Total Students included in Study	2479 (100%)	27 (100%)	2506 (100%)	2586 (100%)	63 (100%)	2649 (100%)	2687 (100%)	87 (100%)	2774 (100%)	

secondary certificate, diploma, or degree, including a journeyperson certificate" (Alberta Education. (2018). Alberta Dual Credit. Retrieved from <https://education.alberta.ca/dual-credit/alberta-dual-credit/>).

¹⁴ NAIT offers transfer credit for programs taken through non-formal workplace learning (e.g., ENFORM, Canadian Red Cross, APEX Training Solutions, etc.). For the purposes of this study, post-secondary learning pursued through the workplace or a regulatory body is defined as 'non-formal learning.'

NAIT Findings

Overall Student Cohort

Figures 1 to 12 and Tables 5 to 11 provide high-level findings for enrolment status, gender, age, and citizenship. While this section includes further details, the general conclusions relevant to the success analyses are highlighted below.

- Although the transfer cohort increased and captured a larger share of the overall enrolment over time, the direct entry class was larger.
- More transfer students increasingly enrolled on a part-time basis with the Fall 2010-11 cohort exceeding the direct entry part-time cohort in absolute values.
- Overall, more men than women were enrolled in both the direct entry and transfer cohorts for each of the Fall cohorts.
- Transfer and direct entry students in the data set were 19 years or older at the point of entry with the transfer cohort consisting of slightly older students.
- Transfer and direct entry students were primarily Canadian citizens or permanent residents, although the transfer cohort data was slightly more diverse with higher international numbers proportionally speaking (the direct entry grouping had higher absolute numbers). The 'n' counts were too low for meaningful analysis. This represents an area of future study should international student enrolments grow in keeping with NAIT's plans for expanding its global reach.

These findings informed the approaches used to compare the success of transfer students to direct entry students later in the report. More specific details regarding each of these findings follow in the next section.

Overall Enrolment and Enrolment Status Profile

Transfer student full-time enrolment¹⁵ across all credentials expanded from the Fall 2008-09 cohort to Fall 2009-10 by 68% (Figure 1).¹⁶ The direct entry cohort experienced less volatility. Full-time transfer students comprised 10% to 15% of overall enrolment. Across all credentials, full-time transfer students grew by 61% from 2008-09 to 2010-11 representing an increase of 155 students (Table 5). This stands in contrast to direct entry students where enrolment grew by 2% over the same period (i.e., an increase of 53 students). Most of the transfer student growth was attributable to the enrolment increases for degree programs which went from less than 10 in 2008-09, to 146 in 2009-10, and 180 in 2010-11 (Table 5).

Part-time enrolments were lower for both cohorts (Figures 1 and 2). While the overall transfer population increased, the direct entry part-time population declined. Given the low 'n' counts for part-time students, much of the subsequent analyses focus primarily on full-time students.

¹⁵ The data set did not include enrolment history; therefore, all analyses including enrolment status were based on status as of the last active registration session.

¹⁶ Percentages noted in Figures were rounded up or down as appropriate throughout the report; therefore, Figures won't always add up to 100%.

Figure 1: Overall Enrolment Changes (Full-time, Part-time; Across all Credentials)

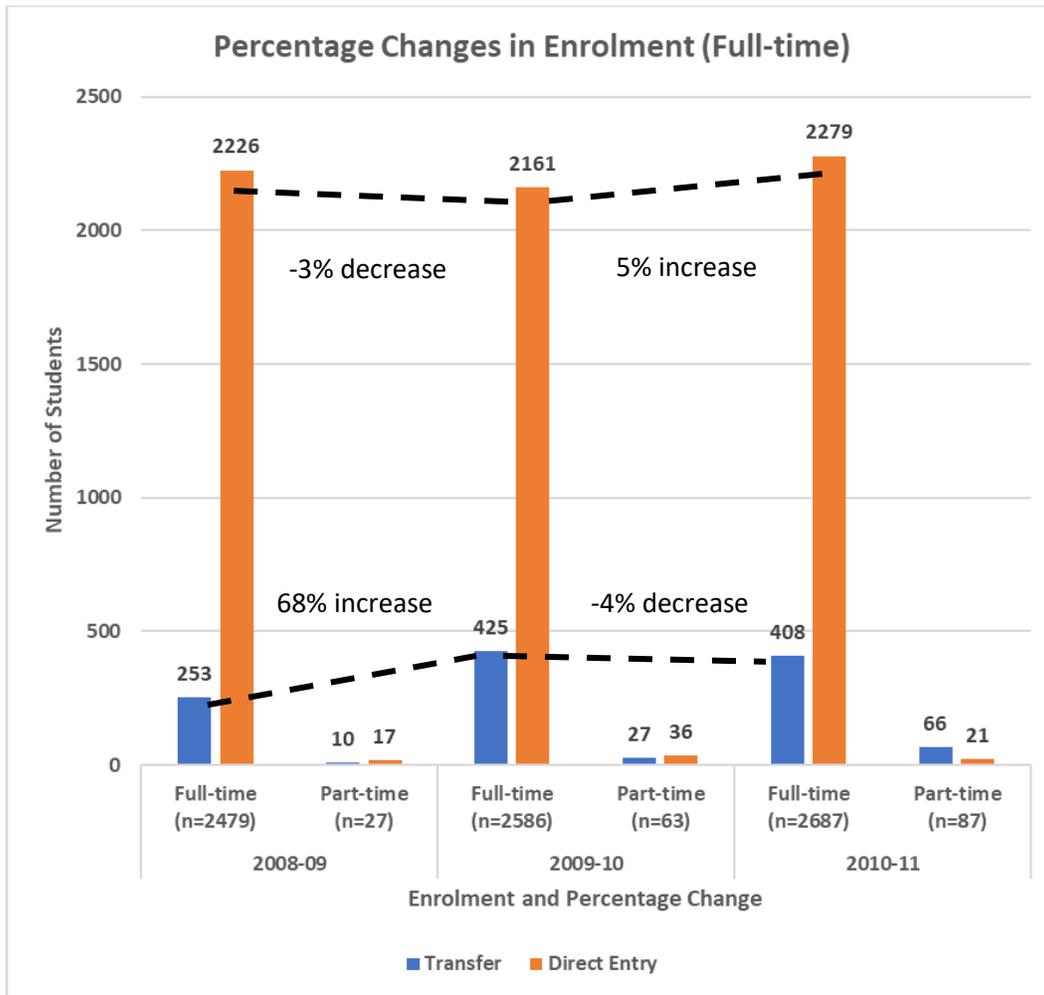
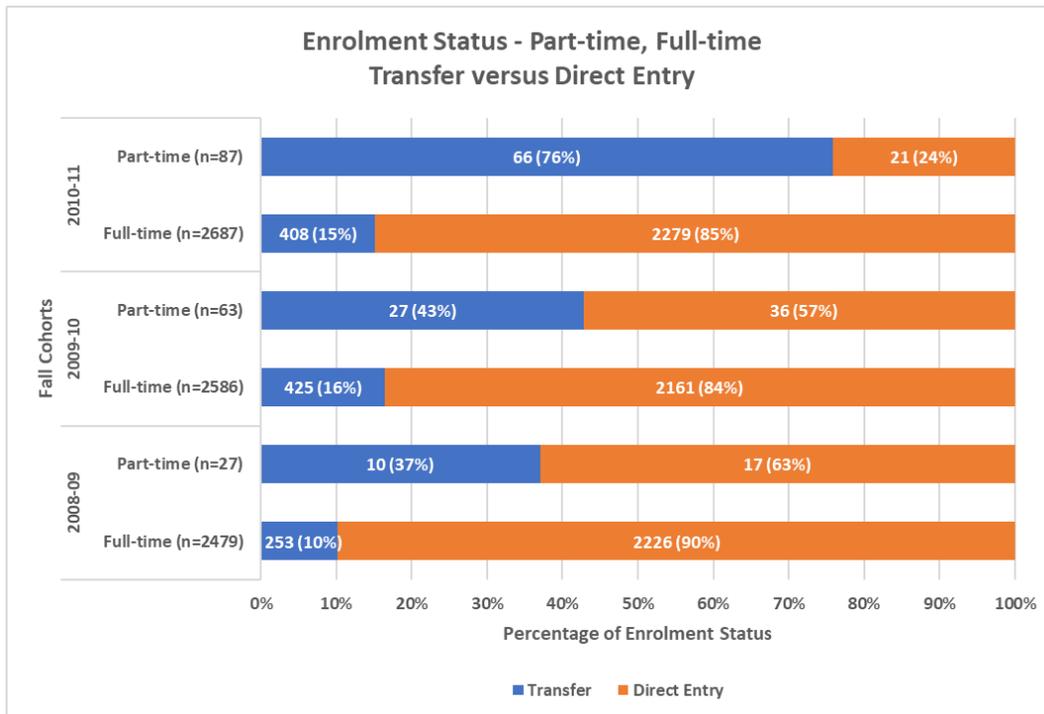


Table 5: Percentage Changes by Credential (Full-time)

Credential	2008-09		Year-over-Year % Change		2009-10		Year-over-Year % Change		2010-11		Overall % Change 2008-09 to 2010-11	
	Transfer	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry
APP DEGREE	x	87	NA	3%	12	90	NA	-21%	x	71	NA	-18%
DEGREE	x	47	NA	-2%	146	46	23%	2%	180	47	NA	0%
DIPLOMA	241	2092	11%	-3%	267	2025	-18%	7%	219	2161	-9%	3%
Total	253	2226	68%	-3%	425	2161	-4%	5%	408	2279	61%	2%

"x" indicates the data were considered sensitive; as such percentages are not available ("NA").

Figure 2: Transfer Student Enrolment Status - Full-time versus Part-time (Across all Credentials)



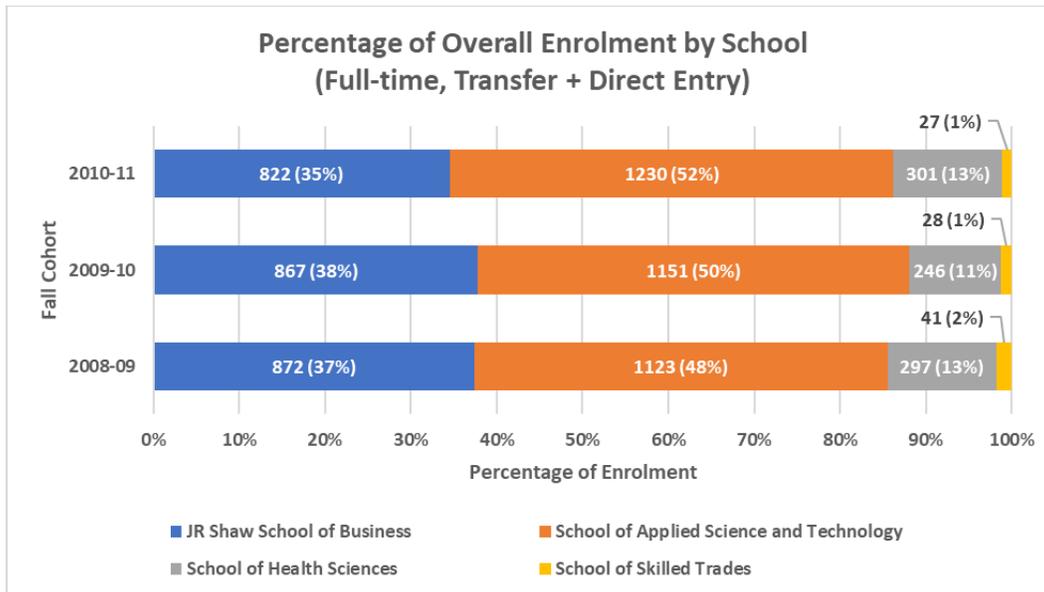
School Profile

Significant academic restructuring occurred during the periods covered by this research. Currently, there are four schools: the JR Shaw School of Business, the School of Health and Life Sciences, the School of Skilled Trades, and the School of Applied Sciences and Technology, and two departments (Continuing Education, Corporate and International Training). Appendix B summarizes the programs in existence during the period covered by the study cross referenced to the new schools; Appendix C contains the full-time enrolments by program.¹⁷ To facilitate school level analyses, the groupings throughout this report reference each school by its current title. Given the small program counts, subsequent analyses focused at the school level only.

The School of Applied Science and Technology enrolled the largest number of students in each Fall cohort; however, it was most impacted by the restructuring exercise. The next two schools with the largest enrolments were the JR Shaw School of Business (Business) and Health and Life Sciences (Health). These schools experienced name changes during the periods covered by the study and no significant restructuring. When combined, these two schools encompassed 48% to 50% of enrolment in any of the Fall cohorts (Figure 3). For example, in the Fall 2008-09 cohort, 37% of the transfer and direct entry students across all credentials enrolled in Business and 13% enrolled in Health for a total of 50% of the overall cohort. Appendix D provides findings regarding transfer student success within these two schools that compare transfer and direct entry students.

¹⁷ 'N' counts for part-time considered sensitive as the program totals for part-time often fell below 10.

Figure 3: Enrolment by School (Full-time; Transfer + Direct Entry)



School Enrolment Profile

Transfer and direct entry students followed somewhat similar enrolment patterns at the school level although there were notable differences.

Diploma students – Figure 4, Table 6

A small number of transfer students enrolled in diploma programs in each of the Fall cohorts (Table 6), totaling 10%, 12%, and 9% of the overall enrolment beginning with Fall 2008-09. Direct entry enrolments totaled 90%, 88%, and 91% respectively in Fall 2008-09, Fall 2009-10, and Fall 2010-11.

Comparing within student cohorts presents some interesting insights. A greater proportional share of the direct entry students in all Fall cohorts enrolled in the Business diploma programs versus transfer students (Figure 4). For example, of the total direct entry diploma students, 38% enrolled in Business in the Fall 2008-09 cohort. In contrast, 33% of the total transfer diploma students enrolled in Business. Proportionally more transfer students enrolled in the School of Applied Science and Technology (52%, 58%, and 55%) versus direct entry students (48%, 49%, and 51%) for the Fall 2008-09 to 2010-11 cohorts. The School of Health Sciences enrolled proportionally consistent percentages in each of the Fall cohorts for both transfer and direct entry students. In the data set for the study, there were no transfer students enrolled in the School of Skilled Trades in the Fall 2008-09 and 2010-11 cohorts.¹⁸

Degree/Applied Degree students – Figure 5, Table 7

NAIT began offering degree level programming in 2008-09 through two Schools: the JR School of Business and the School of Applied Science and Technology. In contrast to diplomas, 91% and 81% of the

¹⁸ As background, to gain admission to the Building Environment Systems Technology program within the School of Skilled Trades requires students provide evidence of successful completion of the HVAC or HVAC and Refrigeration Technician certificates which represents another form of transfer resulting from laddering credentials.

transfer students within the Fall 2009-10 and 2010-11 cohorts enrolled in Business degrees¹⁹ versus 69% and 81% direct entry students (Figure 5). Excluding the Fall 2008-09 cohort, the opposite was true for the School of Applied Science and Technology where 31%, and 19% direct entry students enrolled in Fall 2009-10 and Fall 2010-11. Transfer students in the same school comprised 9% and 12% for the Fall 2009-10 and Fall 2010-11 cohorts.

NAIT enrolled a proportionally higher percentage of transfer students versus direct entry students into its degree programs for the Fall 2009-10 and 2010-11 cohorts (Table 7). The Business school led on this front with 60% (Fall 2009-10) and 64% (Fall 2010-11) enrolled transfer students versus 40% and 36% direct entry students. This appears to indicate that the pathway programming offered at NAIT resulted in more transfer students pursuing degrees.

Table 6: Student Cohorts by School (Full-time, Diploma)

School	Fall 2008-09 Cohort			Fall 2009-10 Cohort			Fall 2010-11 Cohort		
	Transfer	Direct Entry	School Totals	Transfer	Direct Entry	School Totals	Transfer	Direct Entry	School Totals
JR Shaw School of Business	79 (9%)	793 (91%)	872 (100%)	83 (10%)	784 (90%)	867 (100%)	68 (8%)	754 (92%)	822 (100%)
School of Applied Science and Technology	126 (11%)	997 (89%)	1123 (100%)	156 (14%)	995 (86%)	1151 (100%)	121 (10%)	1109 (90%)	1230 (100%)
School of Health Sciences	36 (12%)	261 (88%)	297 (100%)	24 (10%)	222 (90%)	246 (100%)	30 (10%)	271 (90%)	301 (100%)
School of Skilled Trades	NA	41 (100%)	41 (100%)	4 (14%)	24 (86%)	28 (100%)	NA	27 (100%)	27 (100%)
Student Cohort Totals	241 (10%)	2092 (90%)	2333 (100%)	267 (12%)	2025 (88%)	2292 (100%)	219 (9%)	2161 (91%)	2380 (100%)

¹⁹ Applied degrees were included in the degree total due to the low 'n' counts. The chart included Fall 2008-09 as the overall enrolments were higher than 10.

Figure 4: Diploma Enrolments by School (Full-time) - Transfer versus Direct Entry

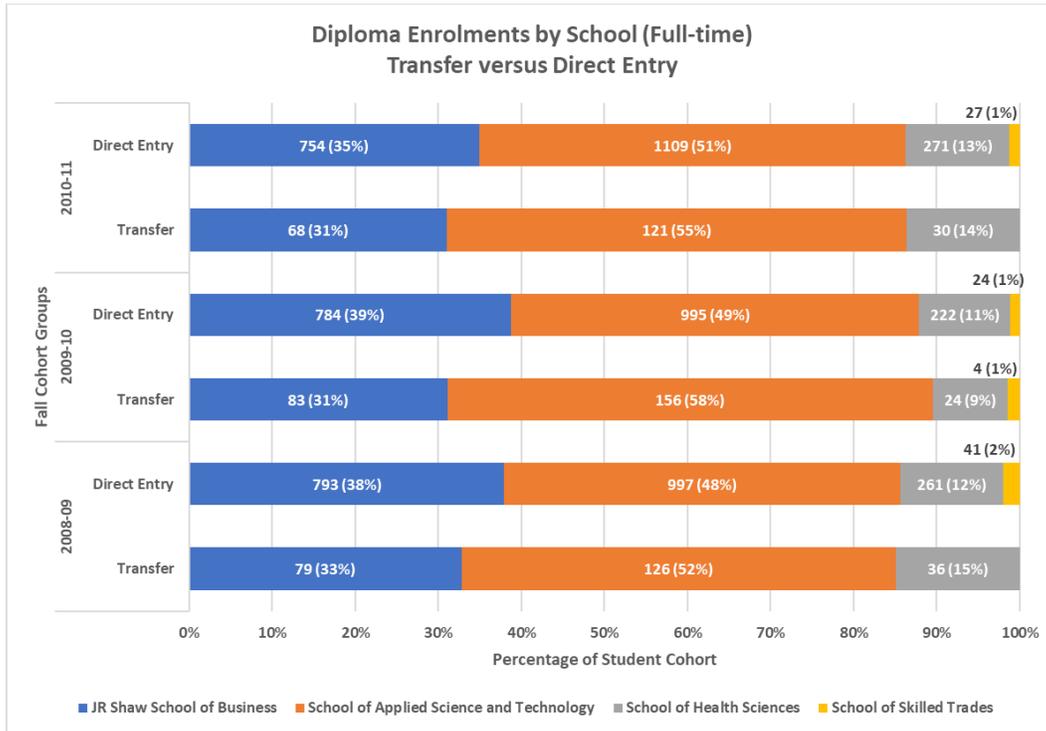


Figure 5: Degree/Applied Degree Enrolments by School (Full-time) - Transfer versus Direct Entry

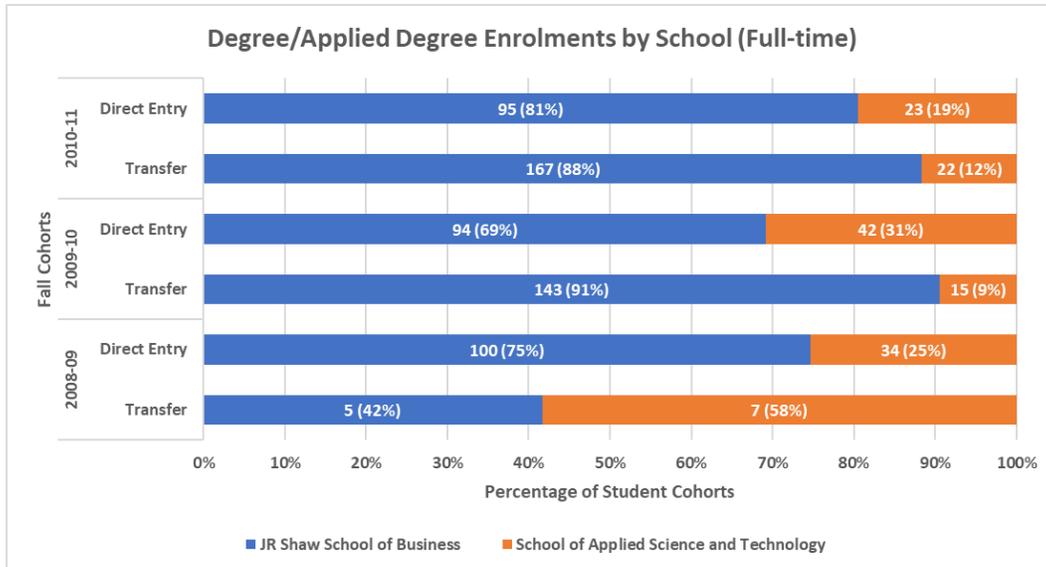


Table 7: Degree Enrolments by School (Full-time)

School	Fall 2008-09 Cohort			Fall 2009-10 Cohort			Fall 2010-11 Cohort		
	Transfer	Direct Entry	School Totals	Transfer	Direct Entry	School Totals	Transfer	Direct Entry	School Totals
JR Shaw School of Business	5 (5%)	100 (95%)	105 (100%)	143 (60%)	94 (40%)	237 (100%)	167 (64%)	95 (36%)	262 (100%)
School of Applied Science and Technology	7 (17%)	34 (83%)	41 (100%)	15 (26%)	42 (74%)	57 (100%)	22 (49%)	23 (51%)	45 (100%)
Student Cohort Totals	12 (8%)	134 (92%)	146 (100%)	158 (54%)	136 (46%)	294 (100%)	189 (62%)	118 (38%)	307 (100%)

Transfer Oriented Program Structures

The higher enrolment of transfer students into degree programs may be due to NAIT's approach to structuring the new degrees within the Business and Applied Science and Technology schools.

- Bachelor of Business Administration (BBA); Bachelor of Applied Business Administration (ADF) – For the BBA, students enter at level 1 or into third year if they have completed a NAIT business diploma.²⁰ For the ADF degree, student enter directly into third year upon completion of a business diploma.²¹
- Bachelor of Applied Information Systems Technology - This is an applied degree following the 2+2 model, meaning students enter directly into year 3 upon completion of a diploma in an aligned discipline.²²
- Bachelor of Technology in Construction Management; Bachelor of Technology in Technology Management – This is another degree program at NAIT that follows the 2+2 model. For these degrees, students enter directly into year three after completing a diploma in an aligned program of study.²³

Further examination of the Business school transfer data revealed no significant difference in the amount of transfer credit awarded to graduates versus non-graduates at the course specific level (Table 8).²⁴ It is important to stress, however, that course specific credit was typically granted to transfer students in addition to two years of block credit. Likely, receipt of this block credit served as a significant incentive (as opposed to the awarding of individual courses); hence, the increase in transfer enrolment in these programs and the greater number of graduates. The report provides more findings at the school level for Business and Health and Life Sciences Appendix D.

²⁰ <http://www.nait.ca/78641.htm#AcademicRequirements>

²¹ <http://www.nait.ca/78531.htm#AcademicRequirements>

²² <http://www.nait.ca/78568.htm>

²³ <http://www.nait.ca/95005.htm> - The Bachelor of Technology in Construction Management began in 2014. The Bachelor of Technology in Technology Management began in 2008.

²⁴ 'N' counts for the School of Applied Sciences and Technology were too low to support this analysis (considered sensitive).

Table 8: Comparing Transfer Credit Awarded – Graduate versus Non-Graduate Transfer Students (Full-time, Degree/Applied Degree, JR Shaw School of Business)

Graduates versus Non-Graduates	Fall 2008-09		Fall 2009-10		Fall 2010-11	
	Grads	Non-Grads	Grads	Non-Grads	Grads	Non-Grads
Total Students	x	x	123	20	144	23
Total Transfer Courses Awarded	x	x	132	24	164	28
Average Courses awarded per person	x	x	1.1**	1.2**	1.1**	1.2**

'x' means count was below 10 (considered sensitive).

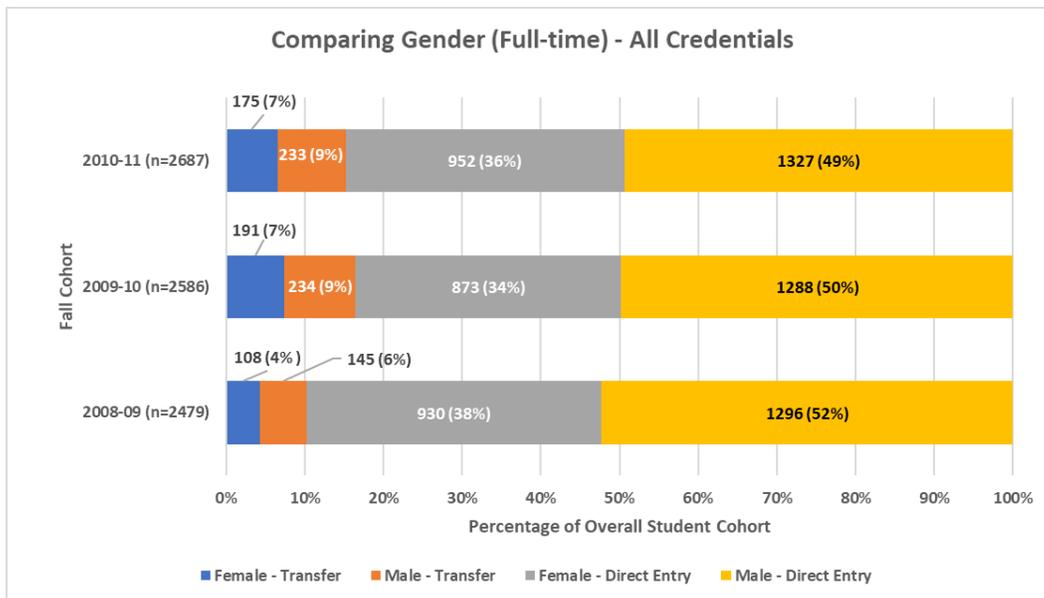
** These courses were in addition to the block credit awarded towards years 1 and 2

Student Demographic Profile

Gender Profile

Males represented the largest proportion of the full-time student body across all Fall cohorts examined for this study (Figure 6, Table 9).²⁵ This finding was true in every year and for every credential (Figure 7). Given this, the section in the report called Transfer Student Success provides findings which examine the gender dimension further in the context of graduation rates.

Figure 6: Comparing Gender - Transfer versus Direct Entry (Full-time, All Credentials)



²⁵ Given the student totals within each year for applied degrees fell below 10, the data were collapsed with regular degrees to preserve privacy.

Figure 7: Gender by Credential – Direct Entry versus Transfer (Full-time)

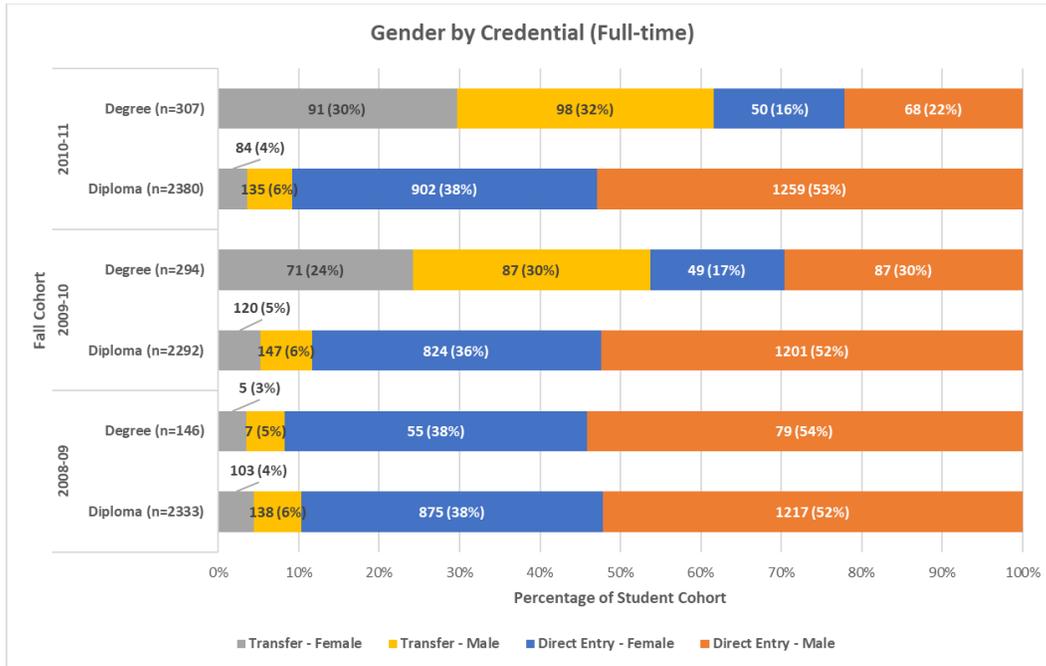


Table 9: Distribution of Cohorts by Gender and Credential (Full-time only)

Degree/Applied Degree – Full-time									
Student Cohort	Fall 2008-09			Fall 2009-10			Fall 2010-11		
	F	M	Totals (%)	F	M	Totals (%)	F	M	Totals (%)
Transfer	5	7	12	71	87	158	91	98	189
Direct Entry	55	79	134	49	87	136	50	68	118
Degree	60	86	146						
Totals	(41%)	(59%)	(100%)	120 (41%)	174 (59%)	294 (100%)	141 (46%)	166 (54%)	307 (100%)
Diploma – Full-time									
Student Cohort	Fall 2008-09			Fall 2009-10			Fall 2010-11		
	F	M	Totals (%)	F	M	Totals (%)	F	M	Totals (%)
Transfer	103	138	241	120	147	267	84	135	219
Direct Entry	875	1217	2092	824	1201	2025	902	1259	2161
Diploma	978	1355	2333						
Totals	(42%)	(58%)	(100%)	944 (41%)	1348 (59%)	2292 (100%)	986 (41%)	1394 (59%)	2380 (100%)
All Credentials – All Student Cohorts									
Transfers	108	145	253	191	234	425	175	233	408
Direct Entry	930	1296	2226	873	1288	2161	952	1327	2279
Totals	1038	1441	2479	1064	1522	2586	1127	1560	2687

Age Profile

Table 10 and Figure 8 provide the average ages of the NAIT student populations for the transfer and direct entry cohorts.²⁶ When considering average age as an indicator, applied degree and degree direct entry students were either older than transfer students (blue shaded sections in Table 10) or around the same age (cream shaded sections in Table 10).²⁷ Diploma transfer students were consistently older than the direct entry students in each of the Fall cohorts.

Using 19 years as the cut-off across all credentials,²⁸ a higher proportion of older transfer students enrolled; however, a large proportion of direct entry students were also older than 19 (Figure 9). In the direct entry category, 80 to 82% in any of the Fall cohorts were 19 years or older. For full-time transfers, 95% or higher were 19 years or older in each of the Fall cohorts.

With that context in mind, it proved problematic to align this research to other studies by grouping students in tighter ranges (e.g., '19-20 years', '21-22 year', etc.). Furthermore, the 'n' counts were too small within select year ranges and with degree and applied degree students to facilitate this approach. Therefore, subsequent age-related analyses focus solely on full-time diploma students.

Using 21 years rather than 19, the data indicate the largest proportion of direct entry diploma students fell below 21 years of age in any given Fall cohort (2008-09 = 62%; 2009-10 = 60%; 2010-11 = 59%; Figure 10, Table 11). Conversely, the largest proportion of transfer students fell in the range of 21 to 25 years of age (2008-09 = 38%; 2009-10 = 34%; 2010-11 = 42%). These age ranges served to inform the framework for this study's examination of success metrics across this dimension.

Table 10: Average Age – Transfer versus Direct Entry Students by Cohort Year and Enrolment Status (Full-time)

Fall Cohorts	Student Cohorts	Applied Degree		Degree		Diploma	
		Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
2008-09	Direct Entry	23.4	23.8	22.1	NA	21.0 (n=2090)	21.3
	Transfer	36.6	34.0	26.4	NA	26.2 (n=241)	22.0
2009-10	Direct Entry	24.6	28.0	22.5	29.7	21.0 (n=2022)	23.8
	Transfer	24.4	NA	22.3	27.8	26.9 (n=266)	27.2
2010-11	Direct Entry	26.5	28.3	20.4	25.3	21.3 (n=2154)	26.4
	Transfer	26.0	28.0	23.8	30.7	26.1 (n=219)	27.0

²⁶ A very small number of 'Undeclared' students were in the data set; these were excluded from the analysis.

²⁷ 'N' counts were masked to preserve privacy.

²⁸ The different values for applied degrees and degrees were masked given the small 'n' counts.

Figure 8: Average Age by Cohort Year, Credential, and Enrolment Status

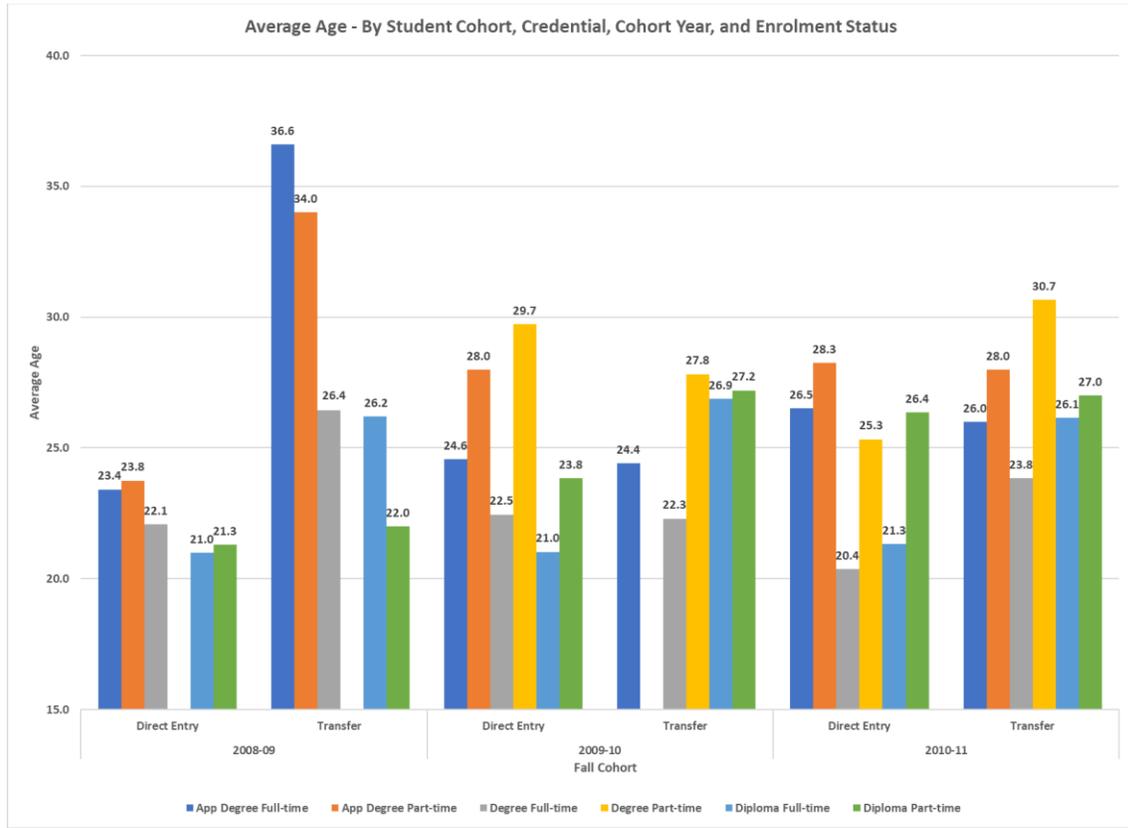


Figure 9: Age Breakdown – Under 19 versus 19+ - Transfer versus Direct Entry (Full-time)

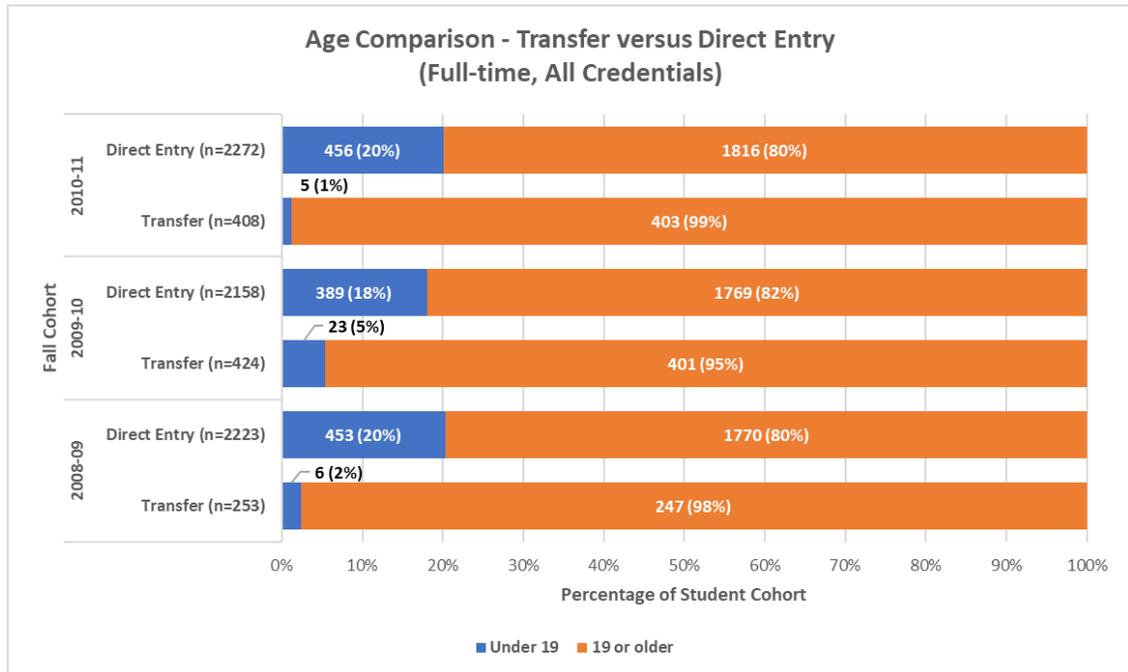


Figure 10: Diploma Students Age Ranges - Direct Entry versus Transfer (Full-time)

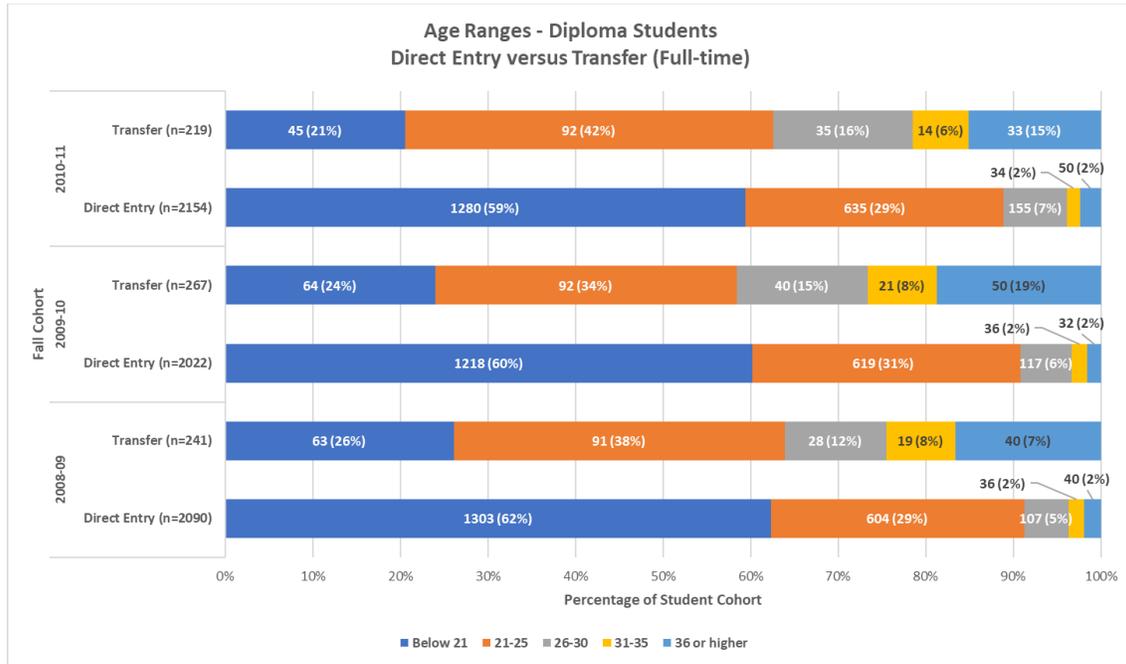


Table 11: Ages of Diploma Students²⁹ - Transfer versus Direct Entry (Full-time)

Age Ranges	Fall 2008-09		Fall 2009-10		Fall 2010-11	
	Transfer	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry
Below 21	63	1303	64	1218	45	1280
21-25	91	604	92	619	92	635
26-30	28	107	40	117	35	155
31-35	19	36	21	36	14	34
36 or older	40	40	50	32	33	50
Totals	241	2090	267	2022	219	2154

²⁹ If column totals fell below 10, the information was not included to preserve privacy. For this reason, students that did not declare were excluded from the analysis.

Citizenship Profile

NAIT appears to attract primarily Canadian students (Figure 11).³⁰ International students made up 2% or less of enrolled students in any given Fall cohort with 2010-11 enrolling the highest number (52/2687). Less than 4% of enrolled students in any given Fall cohort were permanent residents of Canada.

Figure 11: Overall Citizenship Status – Transfer + Direct Entry (Full-Time, All Credentials)

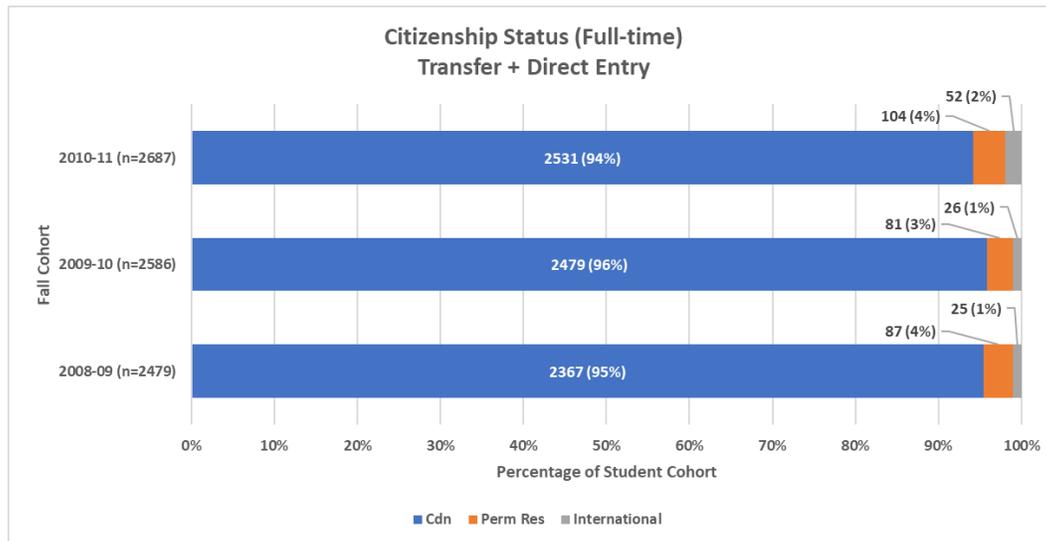
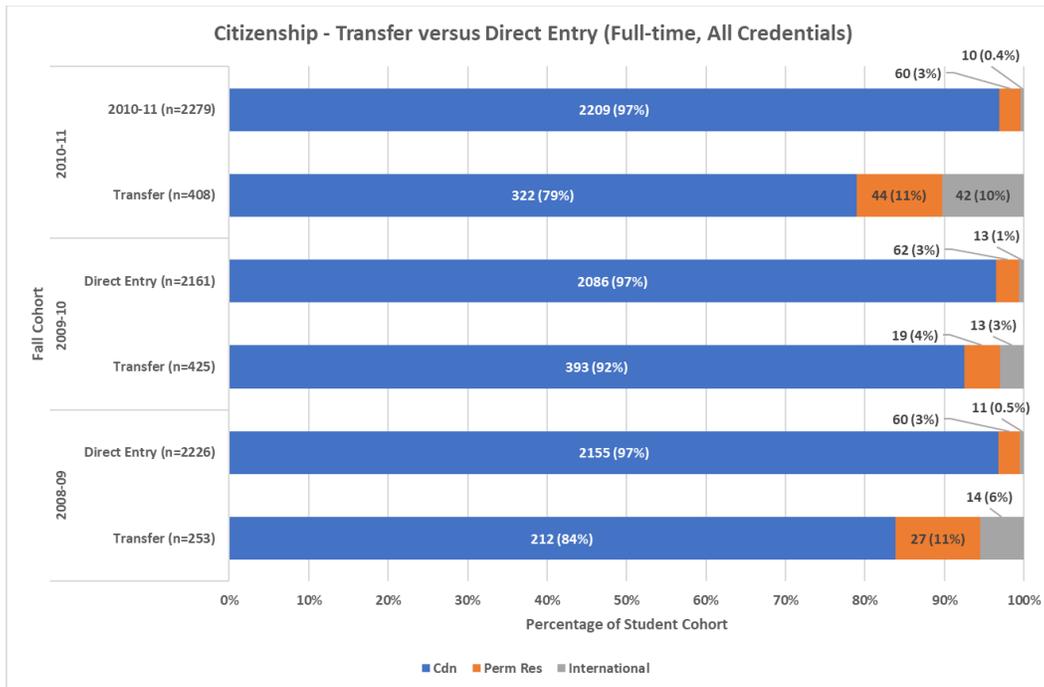


Figure 12 breaks out citizenship separately for full-time transfer and direct entry students. Although the numbers were much smaller than the direct entry class, the transfer cohort consisted of proportionately more international students. As an illustrative example, transfer students as Canadian citizens ranged from 79% to 92% of the class in any given Fall cohort versus 97% in the equivalent Fall cohorts for direct entry students. Transfer students represented a source of international students for NAIT although the numbers fluctuated significantly between Fall cohorts. This cohort represents important emerging opportunities for NAIT given its plans for internationalization (personal communications, April 2018). The 'n' counts were too small to allow an analysis by credential or to explore this dimension in the context of success metrics. Should the numbers grow, this would be an area to examine in the future to determine if there is any relationship with transfer student success.

³⁰ NAIT overwrites citizenship status when new status documents are provided by the student; therefore, these data from the student information system may not reflect a student's status at the point of entry.

Figure 12: Citizenship - Transfer versus Direct Entry (Full-time)



Previous Post-Secondary Transfer Profile

Examining the previous post-secondary backgrounds of the transfer cohort presents some interesting findings relevant when examining success metrics.³¹

- A subset of the NAIT transfer student cohort previously attended a college or institute with university following as the second largest sending institution type.
- A portion of the transfer students, particularly in later years, attended NAIT prior to the years covered by this study, a finding regarding returning students that is relevant when analyzing transfer success at NAIT.
- NAIT drew most of its post-secondary transfers from within Alberta.
- A small subset attended more than one post-secondary institution prior to entering NAIT.
- NAIT awarded credit to a subset of the transfer cohort for non-formal, workplace learning. This practice should be monitored and examined for success at a future point should its prevalence increase.

The first two findings above provided sufficient data sets to allow further quantitative assessment of success. The next section explores the above findings in more detail.

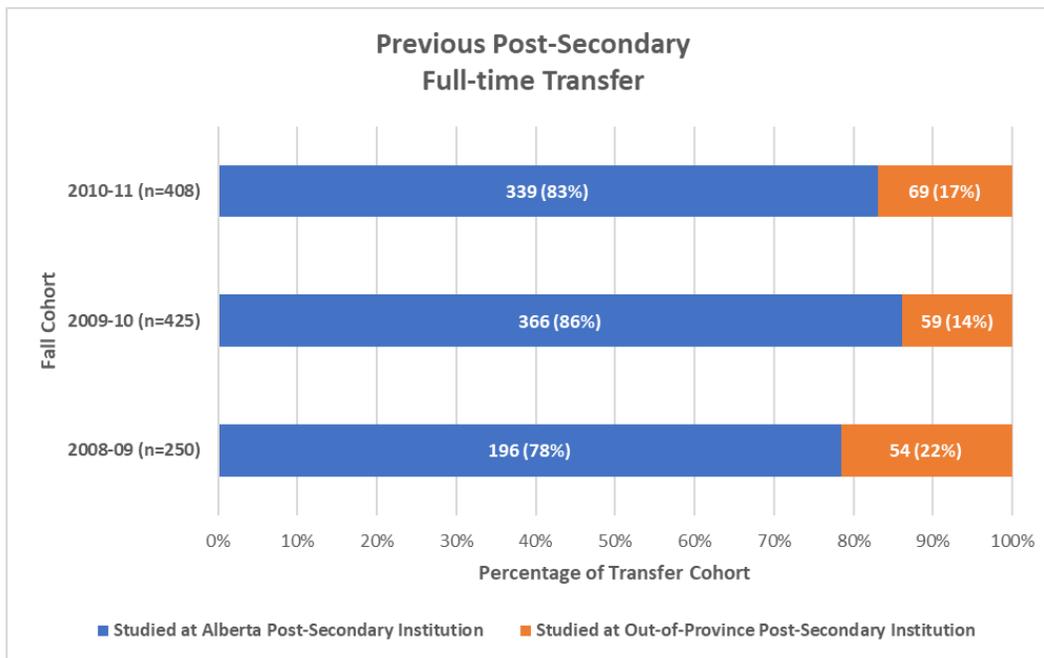
Source of Transfer Students

Most of NAIT's full-time transfer students attended post-secondary studies in Alberta although the absolute number of out-of-province students grew during the years of the study (Figure 13). While a larger proportion of transfer students attended out-of-province post-secondary institutions in the Fall

³¹ Unless stated otherwise, all references to 'degrees' in this section include applied degrees. All data in this section focus on full-time students only given the small part-time numbers in select years (to preserve privacy). The 'n' counts were adjusted to accommodate this approach.

2008-09 cohort (22%) and the pool grew, a smaller proportion applied with this background in subsequent Fall cohorts (Fall 2009-10 = 14%; Fall 2010-11 = 17%).

Figure 13: Out-of-Province Prior Post-Secondary - Transfer Students (Full-time, All Credentials)



Type of Prior Post-Secondary Experience

NAIT enrolled a higher proportion of transfer students who had studied at other colleges or institutes (Figure 14: 44%, 70%, and 67% in each Fall cohort).³² The next largest grouping previously attended university (42%, 22%, 26% respectively in each Fall cohort). The bulk of the remainder came to NAIT and were granted transfer credit based solely on non-formal workplace learning (14% in 2008-09; 8% in each of the Fall 2009-10 and 2010-11 cohorts). The predominance of colleges/institutes followed by universities was true within all the credential types (degrees, applied degrees, and diplomas).

Within each pool, students may have studied at more than one institution or also pursued non-formal learning. Where two learning experiences were evident, the highest form of learning determined the type category (e.g., if they received credit for both non-formal and formal learning, formal learning at the university or college/institute drove the categorization in the analysis). Information was not available regarding when the learning occurred. No additional judgement was made regarding the accreditation/recognition status of the prior institution. If NAIT deemed the prior institution was worthy for admission and transfer credit allocation, that decision was accepted.

A small proportion of NAIT students participated in more than one post-secondary level experience prior to joining NAIT (Figure 15: 12% in Fall 2008-09; 7% in each of the Fall 2009-10 and 2010-11 cohorts respectively).³³ Diploma students participated in prior post-secondary studies more so than degree

³² There were 3 unknowns in the Fall 2008-09 cohort and 2 in the Fall 2010-11 cohort; these students were not included in this analysis. 'N' counts were adjusted accordingly.

³³ The post-secondary learning experience could have resulted from non-formal workplace training or from more traditional studies at a college, university, or institute.

students (Figure 16: the latter includes applied degrees given the low 'n' count; note the 80% on the horizontal axis).

The small size of the pool impeded further analysis of success metrics; however, examining the difference in success for students that continually return to post-secondary studies represents an area of future study should the numbers grow.

Figure 14: Source of Prior Post-Secondary Experience (Full-time, All Credentials)

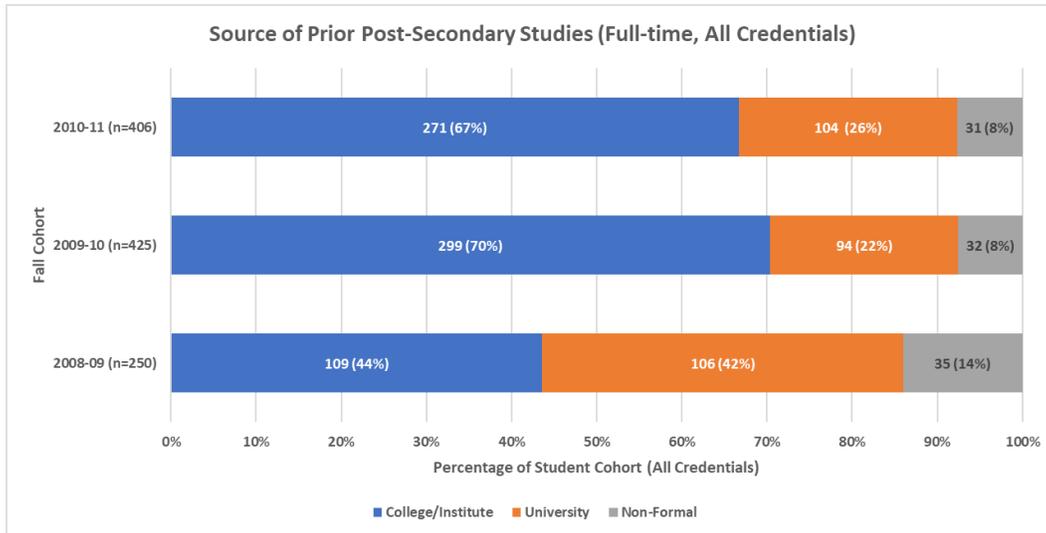


Figure 15: NAIT Transfer Student's Prior Post-Secondary Exposure (Full-time, All Credentials)

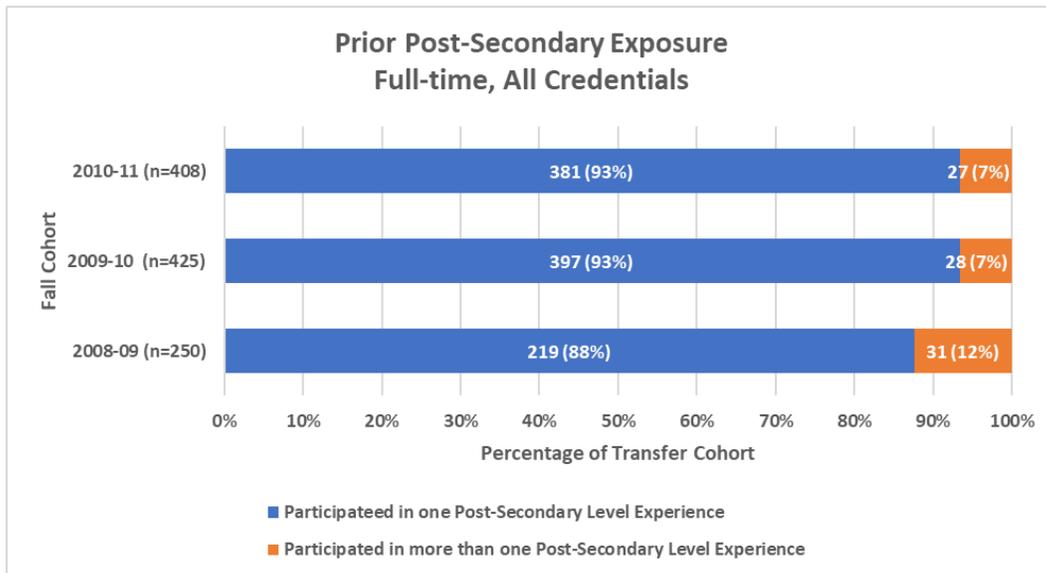
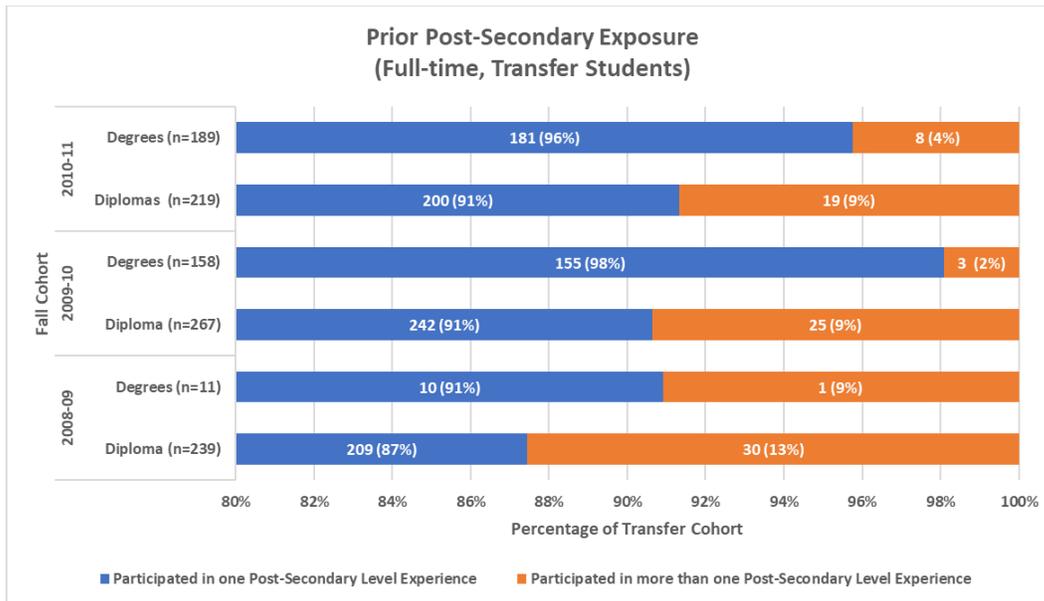


Figure 16: Prior Post-Secondary by Credential (Full-time, Transfer Students)



Prior NAIT Experience Profile

A subset of the Fall 2009-10 and 2010-11 cohorts attended NAIT prior to the periods covered by this study (Figure 17: 60% and 58% respectively); a result that was significantly higher than the 33% found in the Fall 2008-09 cohort.³⁴ Most of the students enrolled in degree programs (including applied degrees) (Figure 18).³⁵ Why this increase occurred is unknown; it may suggest a heightened focus on facilitating the return of prior NAIT students. It also may suggest that effective laddering occurred from diplomas into the degree and applied degree programs which, if correct, represents another indicator of transfer success which might be inadvertently masked if analyses ignore returning students.³⁶

The subsequent analysis of NAIT transfer student success considers returning students. As additional context, the institution maintains a policy of requiring reapplication from all former students who graduated or were required to withdraw (personal communications, February 2018).

³⁴ The analysis did not include transfer students where no specific prior post-secondary level learning experience was known due to low 'n' counts.

³⁵ Degrees and applied degrees were combined due to low 'n' counts for applied degrees (unless stated otherwise).

³⁶ Information was not available on what the students previously studied at NAIT.

Figure 17: Former Transfer Students Who Previously Attended NAIT – Full-time, Across all Credentials

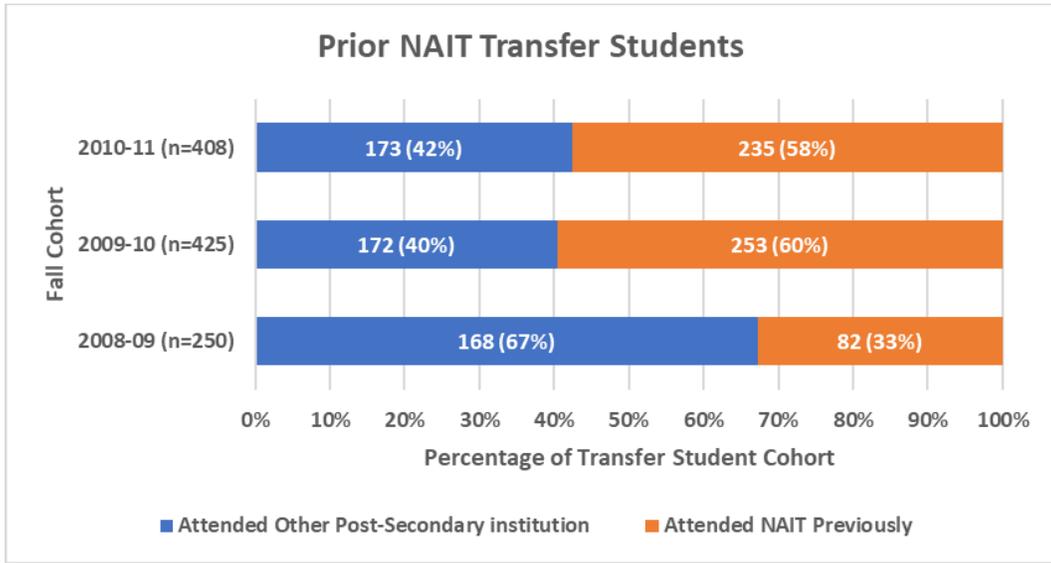
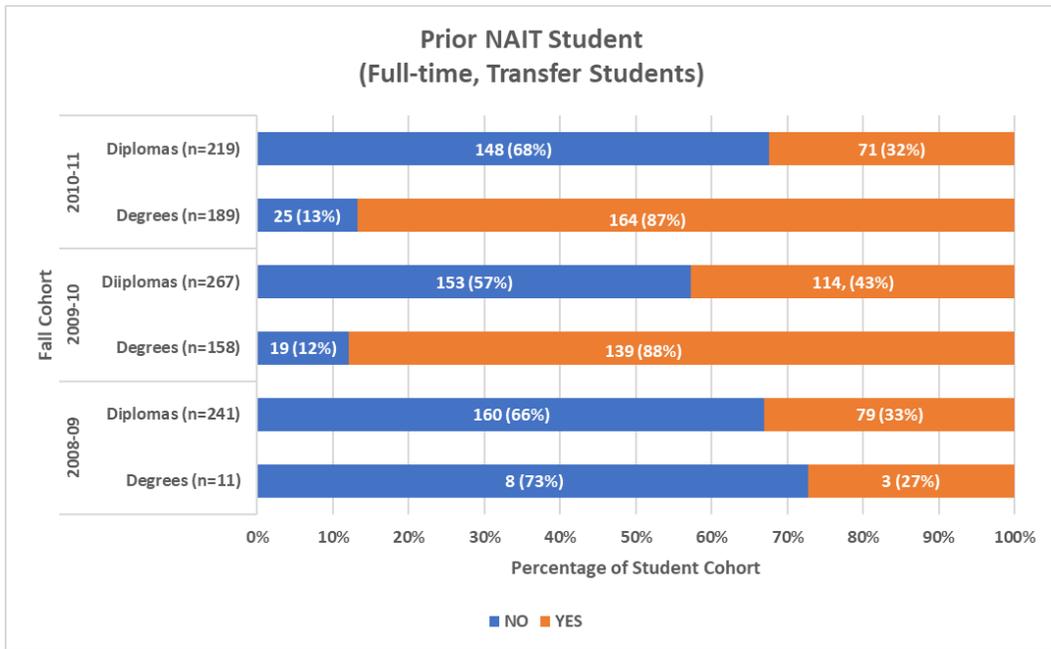


Figure 18: Prior NAIT Experience (Full-time, by Credential)

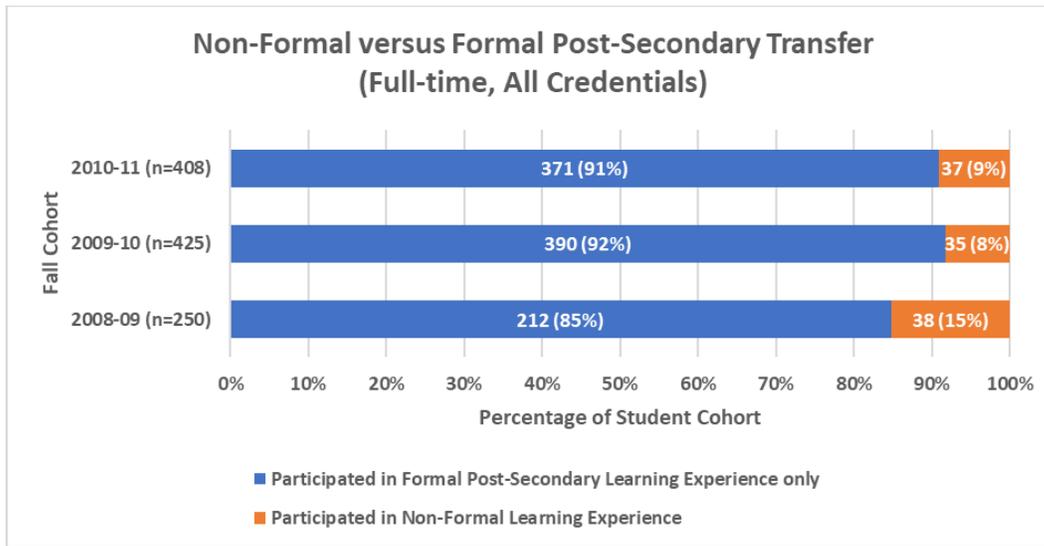


Non-Formal versus Formal Learning Transfer Profile

A small number of students presented non-formal workplace learning for which they received transfer credit through the NAIT admission process (Figure 19: 15% in 2008-09, 8% in 2009-10, and 9% in 2010-11).³⁷ Almost all were admitted to diploma programs. Unfortunately, low ‘n’ counts impeded meaningful analysis of success. This would be an area for future study should the numbers increase.

³⁷ This credit resulted from the transfer credit review process although NAIT does provide credit through flexible assessment processes as part of the prior learning assessment process (personal communications). Those data were not available for this research study.

Figure 19: Non-Formal Versus Formal Transfer Credit Granted by NAIT (Full-time, All Credentials)



Transfer Credit Profile - Awarded at Admission

Almost all NAIT’s incoming transfer students received at least one course as transfer credit even if it was awarded for non-formal, workplace learning.³⁸ NAIT offered both 3-, 4.5-, and 6-credit courses during the period covered in this study.³⁹

The average amount of transfer credit *courses*⁴⁰ awarded per degree student (including applied) in the Fall cohorts studied ranged from 1.1 to 2.3 which was awarded in addition to two years of block transfer credit (Table 12). As a reminder, academically admissible diploma graduates were awarded block credit and admitted directly into year three of the bachelor’s programs.⁴¹ Therefore, any specific courses granted towards the degree would have resulted in additional credit awards.

In the Fall 2008-09, 2009-10, and 2010-11 cohorts, diploma students received an average number of courses ranging from 2.8 to 3.0 which meant each student was awarded approximately half a term towards their credential.

Most transfer students previously studied at NAIT and returned for further studies (Table 13). This was true in every Fall cohort, although the lower ‘n’ counts for individual sending institutions precluded further meaningful analyses. Examining the flow of transfer students between institutions represents an area of future study as it will enhance collective understanding of student mobility in the province. This, in turn, will serve to enhance institutional and system level policy development and creation of supports for transfer students. Having noted this, institutional practices for capturing prior institutions may not

³⁸ The amount of credit was not known as NAIT codes transfer credit at the course level. Forty-four (44) students were excluded from a specific program due to historical record keeping practices. Information on the credit weighting for each course was not available.

³⁹ Credit Framework Procedure IP 1.03:
file:///D:/AA%20ACAT/DATA%20NAIT/IP%201.03%20Credit%20Framework%20Procedure.pdf

⁴⁰ NAIT’s record keeping practices both historically and currently do not allow for capturing credits; only courses are captured in the student information system.

⁴¹ All degrees/applied degrees provide only third year entry except the BBA which also offers year 1 entry.

be consistent or available within student information systems, a challenge and a consideration for this area of analysis.

Table 12: Transfer Courses and Credit Awarded (Full-time, by Credential)

Fall Cohort	2008-09	2009-10	2010-11
Total Students	253	381*	408
Total Transfer Courses Awarded for the entire Transfer Student Cohort (All Credentials)	702	849	824
Total Degrees (including Applied Degrees)	12	158	189
Total Transfer Courses Awarded for entire Degree Transfer Student Cohort	27	174	218
Average Transfer Courses Awarded per Degree Student <i>in addition to the two years of block credit awarded to each student upon entry into third year</i>	2.3 courses + 2 years block credit	1.1 courses + 2 years block credit	1.2 courses + 2 years block credit
Total Diploma Students	241	223*	219
Total Transfer Courses Awarded for entire Diploma Transfer Student Cohort	675	675	606
Average Transfer Courses Awarded per Diploma Student	2.8	3.0	2.8

* Forty-four students excluded due to historical record keeping practices for transfer credit.

Table 13: A Sampling of Top Source Institutions for Transfer Credit (Full-time, Diplomas)

Source of Transfer Credit	2008-09 Courses Awarded		2009-10 Courses Awarded		2010-11 Courses Awarded	
	Courses Awarded	Students	Courses Awarded	Students	Courses Awarded	Students
NAIT	148 (22%)	69 (29%)	171 (25%)	70 (32%)	138 (23%)	67 (31%)
University of Alberta	98 (15%)	38 (16%)	82 (12%)	21 (9%)	55 (9%)	30 (14%)
MacEwan University	49 (7%)	23 (10%)	66 (10%)	16 (7%)	23 (4%)	14 (6%)
Other	380 (56%)	111 (46%)	356 (53%)	116 (52%)	390 (64%)	108 (49%)
Totals	675 (100%)	241 (100%)	675 (100%)	223 (100%)	606 (100%)	219 (100%)

Transfer Student Success

GPA

The average GPA analysis indicates both transfer and direct entry students were successful, notwithstanding some variances.⁴²

Degree Students⁴³

a) *All Degree Students with Grades – Figure 20, Table 14*

Transfer and direct entry degree students tended to have lower average GPAs at the end of first year versus at the last point of registration or graduation (Figure 20, Table 14). By last point of registration, transfer students performed on par or higher than direct entry students apart from the Fall 2009-10 cohort.

- For the Fall 2008-09 cohort, transfer students achieved an average GPA of 2.89 versus 2.96 for direct entry students. Both cohorts finished at roughly the same level as of the last point of registration (3.03 versus 3.00).
- In the Fall 2009-10 cohort, both groups earned an average GPA of 2.90 at the end of year one. Direct entry students graduated with a higher average GPA (3.03 versus a 2.98 average GPA for transfers).
- In the Fall 2010-11 cohort, both transfer and direct entry students finished year one with lower average GPAs (2.88 and 2.79 respectively). At the last point of registration, the average GPA for transfer students was 2.95 versus 2.87 for direct entry students.

⁴² At NAIT, no grade is assigned when students engage in courses for audit or Pass/Fail or withdraw early before the official drop date; therefore, students with no GPAs were excluded. For these analyses, the data sets included students who graduated, withdrew or who remain active in the present day if GPAs were available for both the end of first year and at last evidence of registration/graduation.

⁴³ Degrees and applied degrees were combined in the analyses in this section given the low 'n' counts for applied degrees.

Figure 20: GPA Trend Comparison - All Degrees/Applied Degrees with GPAs; Transfer versus Direct Entry (Full-time)

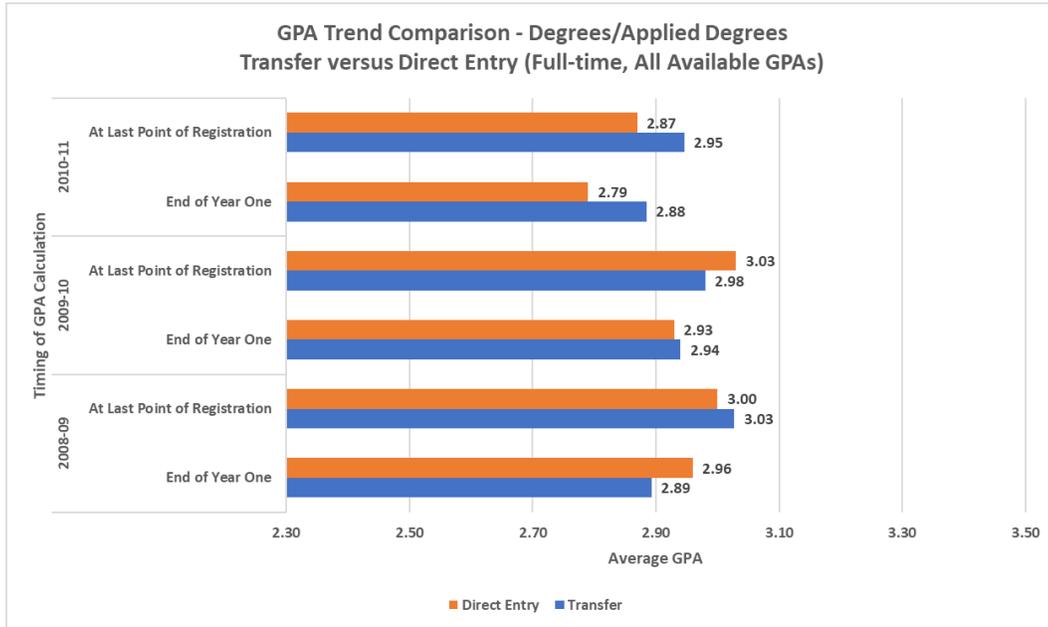


Table 14: GPA Comparison - End of Year One versus Last Active Registration Transfer versus Direct Entry (Degree/Applied Degree, Full-time, All Available GPAs)

Fall Cohort	Student Cohort	Avg GPA			Total Students
		End of Year One	At Last Registration	Difference	
2008-09	Transfer	2.89	3.03	0.14	12
	Direct Entry	2.96	3.00	0.04	131
2009-10	Transfer	2.94	2.98	0.04	158
	Direct Entry	2.93	3.03	0.10	132
2010-11	Transfer	2.88	2.95	0.07	188
	Direct Entry	2.79	2.87	0.08	117

b) *Graduating Degree Students only with Grades – Figure 21, Table 15⁴⁴*

Average GPAs at the end of year one for graduating degree students were typically lower than average GPAs at graduation for both student cohorts (Figure 21, Table 15). Transfer students experienced lower average GPAs in comparison to direct entry students apart from the Fall 2008-09 cohort when their numbers were too low to examine.⁴⁵ Direct entry students obtained higher average GPAs across the board in both the Fall 2009-10 and 2010-11 cohorts.

⁴⁴ Where data fell below 10 students, cells contain an “x”; the data were excluded from the Figures to preserve privacy.

⁴⁵ The average GPA for the Fall 2008-09 transfer cohort were not included; data considered sensitive given ‘n’ count.

Figure 21: GPA Trend Comparison: Degree/Applied Degree Graduates only
At End of Year One versus At Graduation (Full-time)

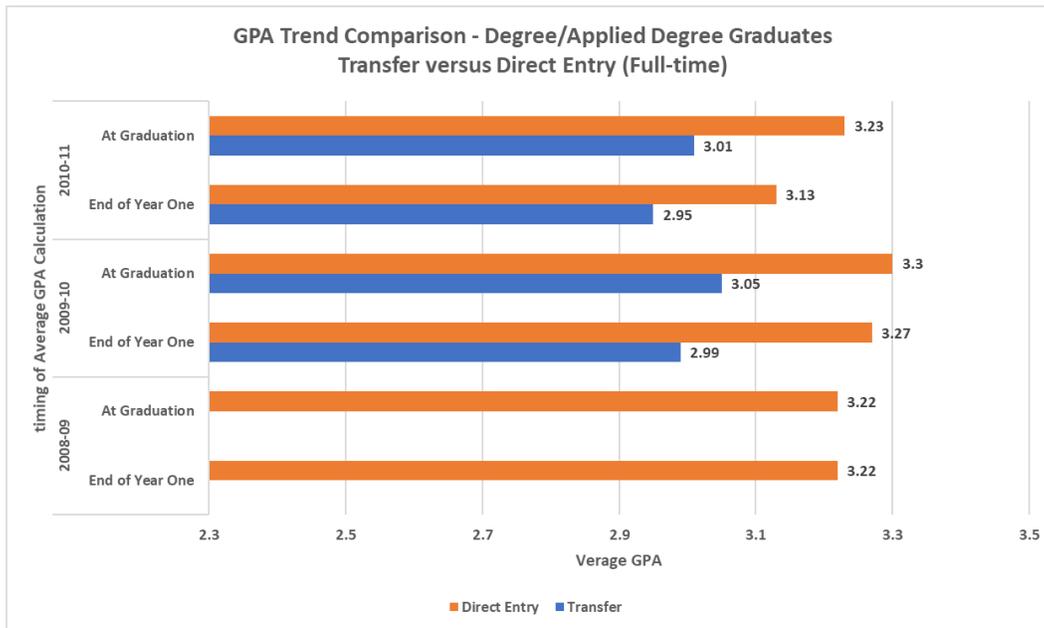


Table 15: Average GPA Comparison: Degree/Applied Degree Graduates only – End of Year One versus at Graduation
Transfer versus Direct Entry (Full-time)

Fall Cohort	Student Cohorts	Avg GPA			Total Students
		End of Year One	At Graduation	Difference	
2008-09	Transfer	x	x	x	67
	Direct Entry	3.22	3.22	0.0	
2009-10	Transfer	2.99	3.05	0.06	138
	Direct Entry	3.27	3.30	0.03	75
2010-11	Transfer	2.95	3.01	0.06	163
	Direct Entry	3.13	3.23	0.1	59

'x' = Data considered sensitive; fell below 10.

Diploma Students

a) All Diploma Students with Grades - Figure 22, Table 16

Transfer diploma students with grades (regardless of reasons for exiting) performed at a higher level than direct entry students across all Fall cohort groups at end of year one and at last point of registration (Figure 22, Table 16). Unlike degree students, the average GPAs for transfers dropped slightly from end of first year to last point of registration in all the Fall cohort groups. Direct entry students increased.

Figure 22: GPA Trend Comparison - All Diplomas with GPAs; Transfer versus Direct Entry (Full-time)

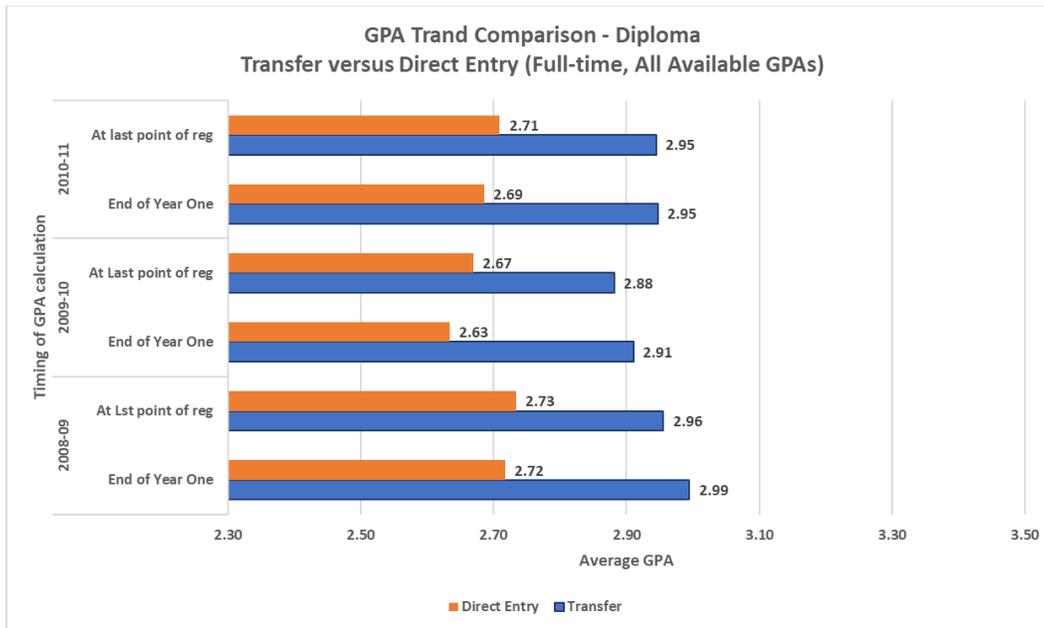


Table 16: Average GPA Comparison – All Diplomas with GPAs - End of Year One versus Last Active Registration; Transfer versus Direct Entry (Full-time, All Available GPAs)

Fall Cohort	Student Cohort	Average GPA			Total Students
		At End of Year One	At Last Registration	Difference	
2008-09	Transfer	2.99	2.96	-0.03	238
	Direct Entry	2.72	2.73	0.01	
2009-10	Transfer	2.91	2.88	-0.03	263
	Direct Entry	2.63	2.67	0.04	
2010-11	Transfer	2.95	2.95	0.00	210
	Direct Entry	2.69	2.71	0.02	

b) *Graduating Diploma Students only with Grades – Figure 23, Table 17*

Direct entry students performed at a higher average GPA at graduation versus at the end of year one in each Fall cohort except in Fall 2008-09 when they achieved the same average GPA in both instances (2.94); in all cases, the difference was slight (Figure 23, Table 17). Transfer students consistently achieved high average GPAs versus direct entry in any of the Fall cohorts examined although their results dropped slightly by graduation.

Figure 23: GPA Trend Comparison - Diploma Graduates only with GPAs At End of Year One versus at Graduation; Transfer versus Direct Entry (Full-time)

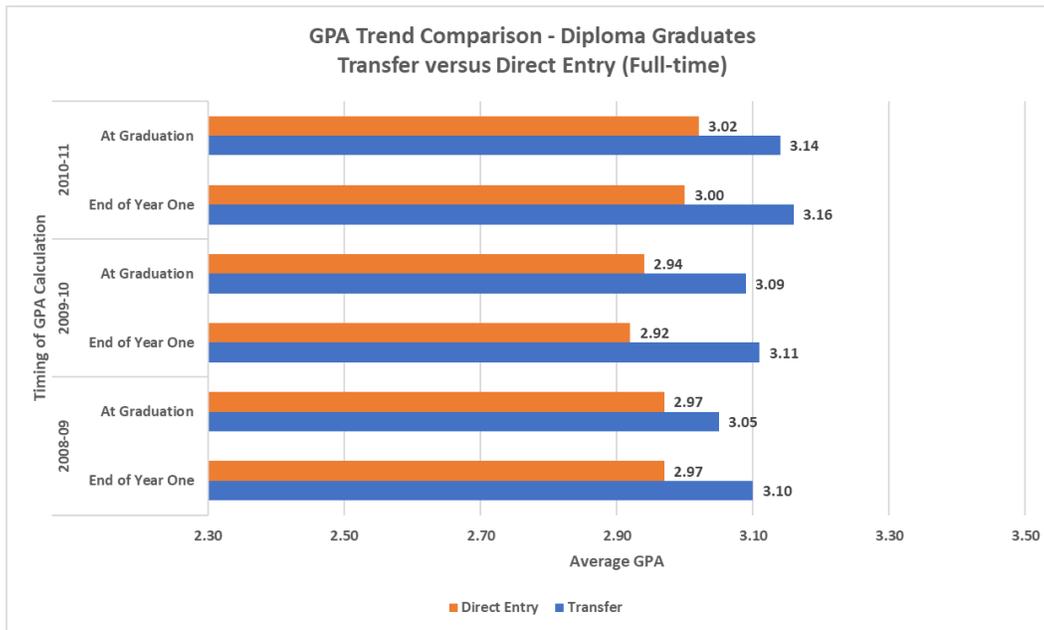


Table 17: Average GPA Comparison - Diploma Graduates only; at End of Year One versus at Graduation (Full-time)

Fall Cohort	Student Cohort	Avg GPA			Total Students
		At End of Year One	At Graduation	Difference	
2008-09	Transfer	3.10	3.05	-0.05	203
	Direct Entry	2.97	2.97	0.00	1531
2009-10	Transfer	3.11	3.09	-0.02	222
	Direct Entry	2.92	2.94	0.02	1442
2010-11	Transfer	3.16	3.14	-0.02	175
	Direct Entry	3.00	3.02	0.02	1503

Graduation Rates and Degree Completion Timing

Degree and Applied Degree Students

The findings indicate NAIT transfer students within degree/applied degree programs successfully reached credential completion as did direct entry students.

Transfer students pursuing degrees⁴⁶ graduated at a higher proportional rate than direct entry degree students within each of the Fall cohorts (Figure 24). Apart from the Fall 2008-09 cohort for which absolute numbers were small, 87% and 86% graduated in the Fall 2009-10 and 2010-11 cohorts respectively. In contrast, 55% and 50% of direct entry students graduated. Of those that did graduate, most did so within three years (Figure 25, Table 18)⁴⁷.

At NAIT, students who withdrew could have left for any number of reasons ranging from academic difficulty to life circumstances. Students who were coded as 'inactive' chose not to continue in their program; the reasons why are not known. NAIT transfer students pursuing degrees withdrew at a

⁴⁶ All references to 'degrees' in this section include both degrees and applied degrees.

⁴⁷ The rate calculations are not cumulative.

proportionally lower rate than NAIT direct entry students (Figure 26, Table 19). In the Fall 2008-09 cohort, 30% direct entry students withdrew versus 25% transfer students; in the Fall 2009-10 cohort, 15% withdrew versus 11% transfer students; and in the Fall 2010-11 cohort, 31% withdrew versus 13% transfer students.

Figure 24: Degree Graduation Rates - Transfer versus Direct Entry (Full-time, All Degrees)

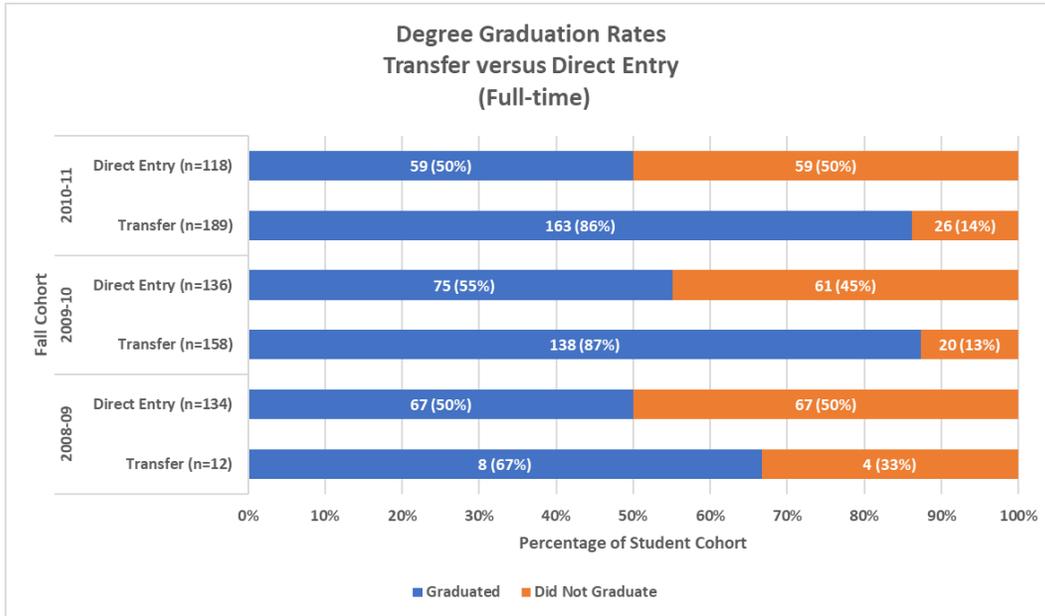


Figure 25: Completion Timing – Degrees/Applied Degrees Transfer versus Direct Entry (Full-time)

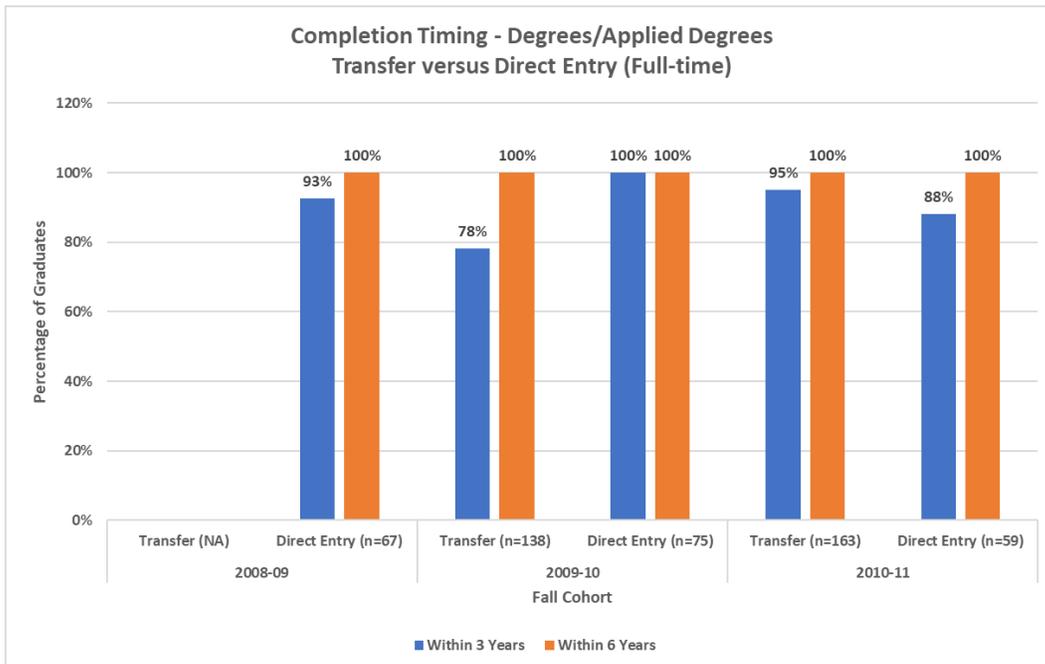


Table 18: Completion Rates - Degree Students (Full-time)

Fall Cohort	Student Cohort	Graduated Within 3 Years	Graduated Beyond 3 Years	Did Not Graduate	Row Totals
2008-09	Transfer	8 (67%)	NA	4 (33%)	12 (100%)
	Direct Entry	62 (46%)	5 (4%)	67 (50%)	134 (100%)
2009-10	Transfer	108 (68%)	30 (19%)	20 (13%)	158 (100%)
	Direct Entry	75 (55%)	NA	61 (44%)	136 (100%)
2010-11	Transfer	155 (82%)	8 (4%)	26 (14%)	189 (100%)
	Direct Entry	52 (44%)	7 (6%)	59 (50%)	118 (100%)

Row totals below 10 were considered sensitive.

Figure 26: Degree Students - Transfer versus Direct Entry - Completion, Active, Withdrawal, Inactive Rates

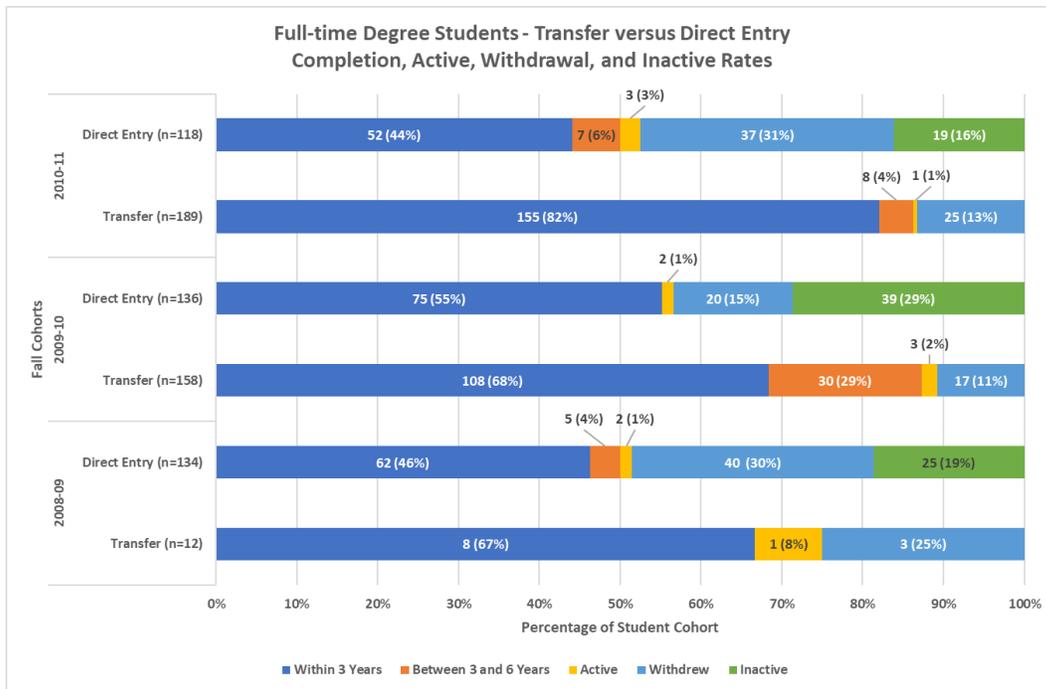


Table 19: Graduation, Active, Withdrawal, and Inactive Rates - Degree Students (Full-time)

Fall Cohort	Student Cohort	Graduated	Active	Withdrew	Inactive	Totals
2008-09	Transfer (n=12)	8 (67%)	1 (8%)	3 (25%)	0	12 (100%)
	Direct Entry (n=134)	67 (50%)	2 (1%)	40 (30%)	25 (19%)	134 (100%)
2009-10	Transfer (n=158)	138 (87%)	3 (2%)	17 (11%)	0	158 (100%)
	Direct Entry (n=136)	75 (55%)	2 (1%)	20 (15%)	39 (29%)	136 (100%)
2010-11	Transfer (n=189)	163 (86%)	1 (1%)	25 (13%)	0	189 (100%)
	Direct Entry (n=118)	59 (50%)	3 (3%)	37 (31%)	19 (16%)	118 (100%)

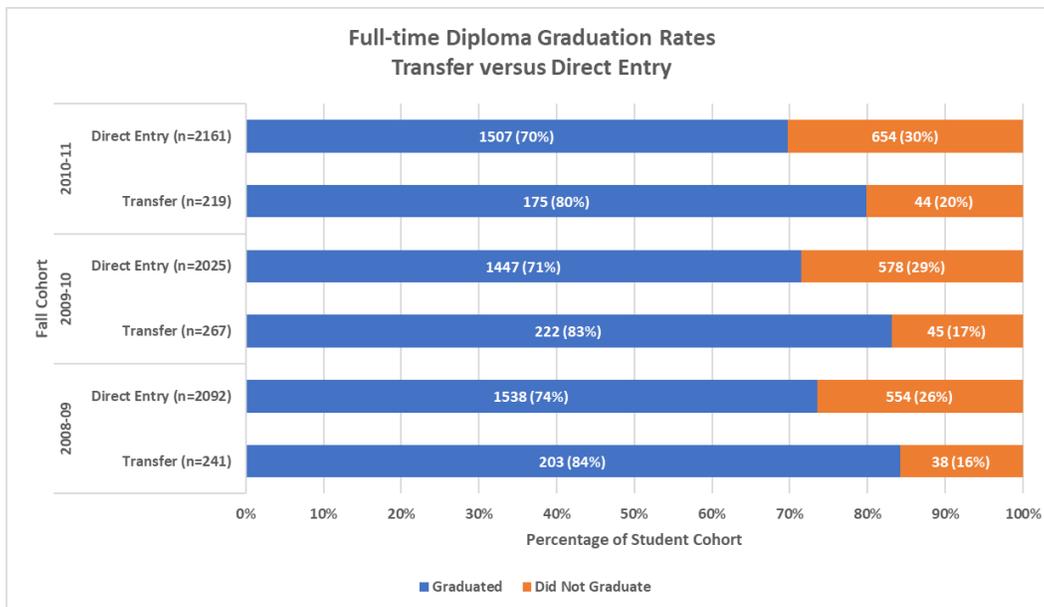
Row totals below 10 were considered sensitive.

Diploma Students

Full-time diploma students followed similar trends to the degree students. Within each of the Fall cohort groups, transfer diploma students successfully graduated at a higher proportional rate versus direct entry students (Figure 27). Eighty percent (80%) or higher of the transfer students graduated versus 70% to 74% of the direct entry students. While the volume of direct entry students was much higher than transfer students in each of the Fall cohorts, the findings indicate NAIT transfer students within diploma programs successfully reached credential completion. Of those who graduated, most did so within three years (Figure 28, Table 20).⁴⁸ The same is true of direct entry students.

NAIT transfer diploma students for the Fall 2008-09, 2009-10, and 2010-11 cohorts withdrew at a lower proportional rate versus NAIT direct entry students although the numbers were small for both groups compared to those who graduated (Figure 29, Table 21). In the Fall 2008-09, 2009-10, and 2010-11 cohorts, 10%, 12%, and 15% of the transfer students withdrew versus 16%, 20%, and 20% of the direct entry students respectively. As with degree candidates, students who withdrew could have left for any number of reasons ranging from academic difficulty to life circumstances and students who were coded as 'inactive' chose not to continue in their program; the reasons why are not known.

Figure 27: Diploma Graduation Rates - Transfer versus Direct Entry (Full-time)



⁴⁸ Figure 28 includes cumulative results apart from those for 'Beyond 6 years'. These data only focused on those who graduated. It excluded anyone who did not graduate.

Figure 28: Diploma Completion Timing – Transfer versus Direct Entry (Full-time)

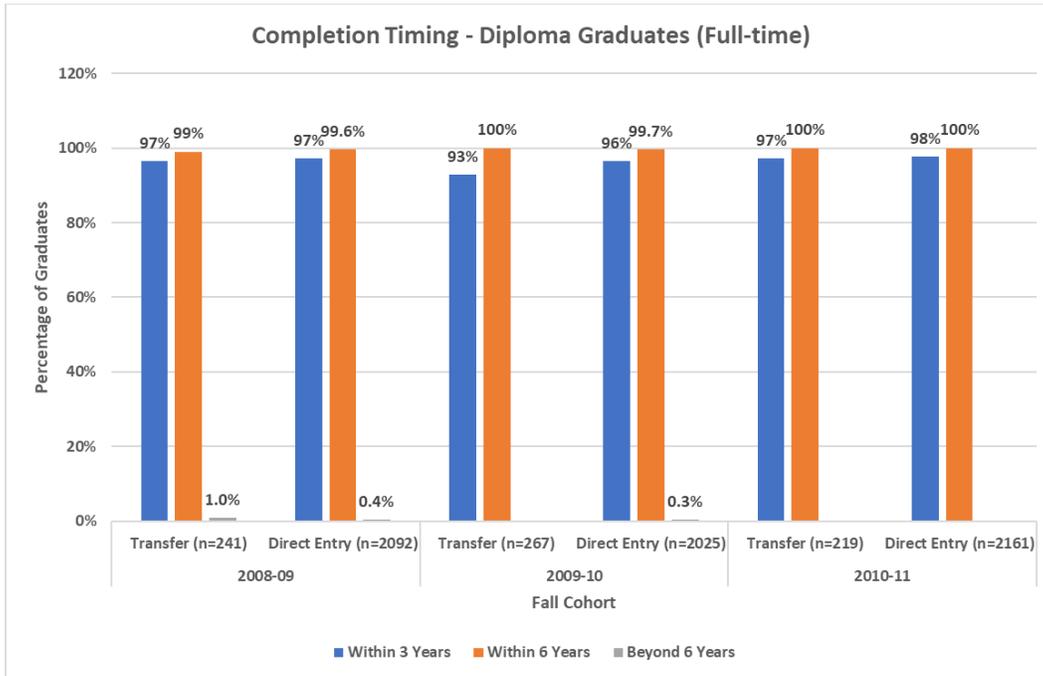


Table 20: Completion Timing for Diploma Students – Direct Entry versus Transfer Students (Full-time)

Fall Cohort	Student Cohort	Within 3 Years	Between 3 to 6 Years	Beyond 6 Years*	Row Totals
2008-09	Transfer	196 (97%)	5 (2%)	2 (1%)	203 (100%)
	Direct Entry	1495 (97%)	37 (2%)	6 (.04%)	1532 (100%)
2009-10	Transfer	206 (93%)	16 (7%)	0%	222 (100%)
	Direct Entry	1395 (96%)	47 (3%)	5 (.03%)	1447 (100%)
2010-11	Transfer	170 (97%)	5 (3%)	0%	175 (100%)
	Direct Entry	1472 (98%)	35 (2%)	0%	1507 (100%)

Row totals below 10 were considered sensitive.

Figure 29: Time to Completion and Active/Withdrawal Rates

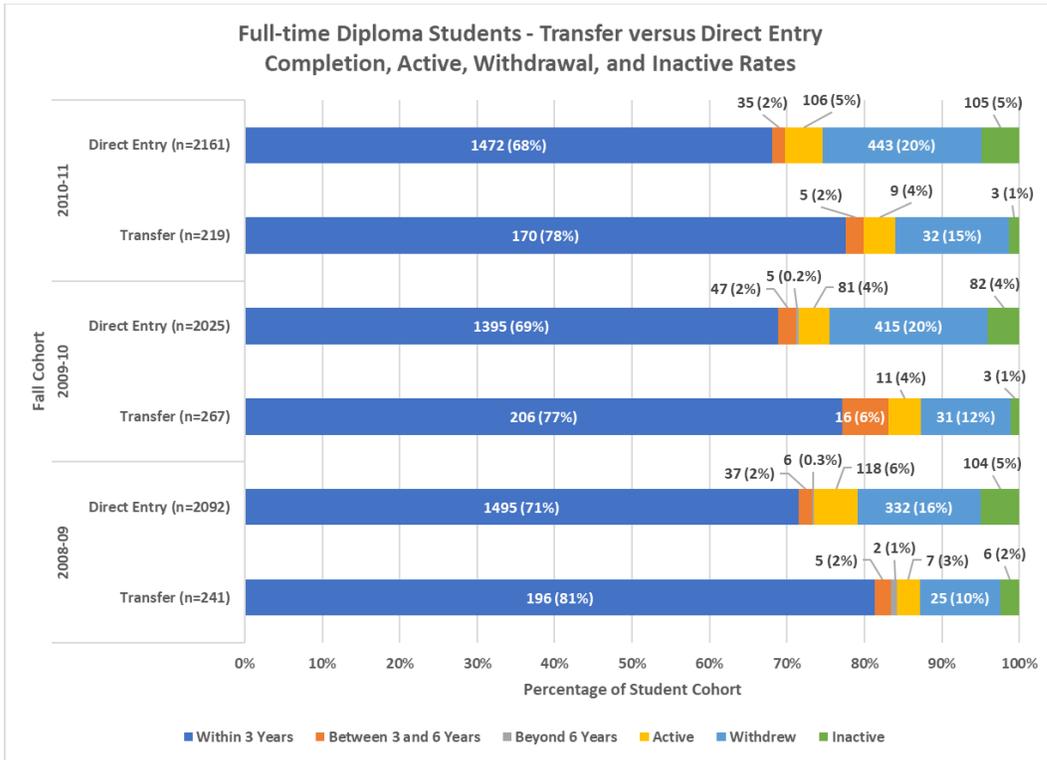


Table 21: Graduation, Active, Withdrawal, and Inactive Rates - Diploma Students: Transfer versus Direct Entry (Full-time)

Fall Cohort	Student Cohort	Graduated	Active	Withdrawn	Inactive	Totals
2008-09	Transfer (n=241)	203 (84%)	7 (3%)	25 (10%)	6 (2%)	241 (100%)
	Direct Entry (n=2092)	1538 (74%)	118 (6%)	332 (16%)	104 (5%)	2092 (100%)
2009-10	Transfer (n=267)	222 (83%)	11 (4%)	31 (12%)	3 (1%)	267 (100%)
	Direct Entry (n=2025)	1447 (71%)	81 (4%)	415 (20%)	82 (4%)	2025 (100%)
2010-11	Transfer (n=219)	175 (80%)	9 (4%)	32 (15%)	3 (1%)	219 (100%)
	Direct Entry (n=2161)	1507 (70%)	106 (5%)	443 (20%)	105 (5%)	2161 (100%)

Age and Graduation Rates

Without exception, transfer students pursuing diplomas maintained a higher graduation rate in comparison to direct entry diploma students within all age categories (Figure 30, Table 22).⁴⁹ For example, in the Fall 2008-09 cohort, 84% of transfer students aged less than 21 graduated versus 70% of direct entry students. The same trend is true for the Fall 2009-10 cohort (75% for transfer versus 70% for direct entry), and 2010-11 (73% versus 69%). In all cases, most of these students graduated within 3 years. These findings suggest that for transfer students at NAIT, age does not appear to be a contributing factor impacting on success.

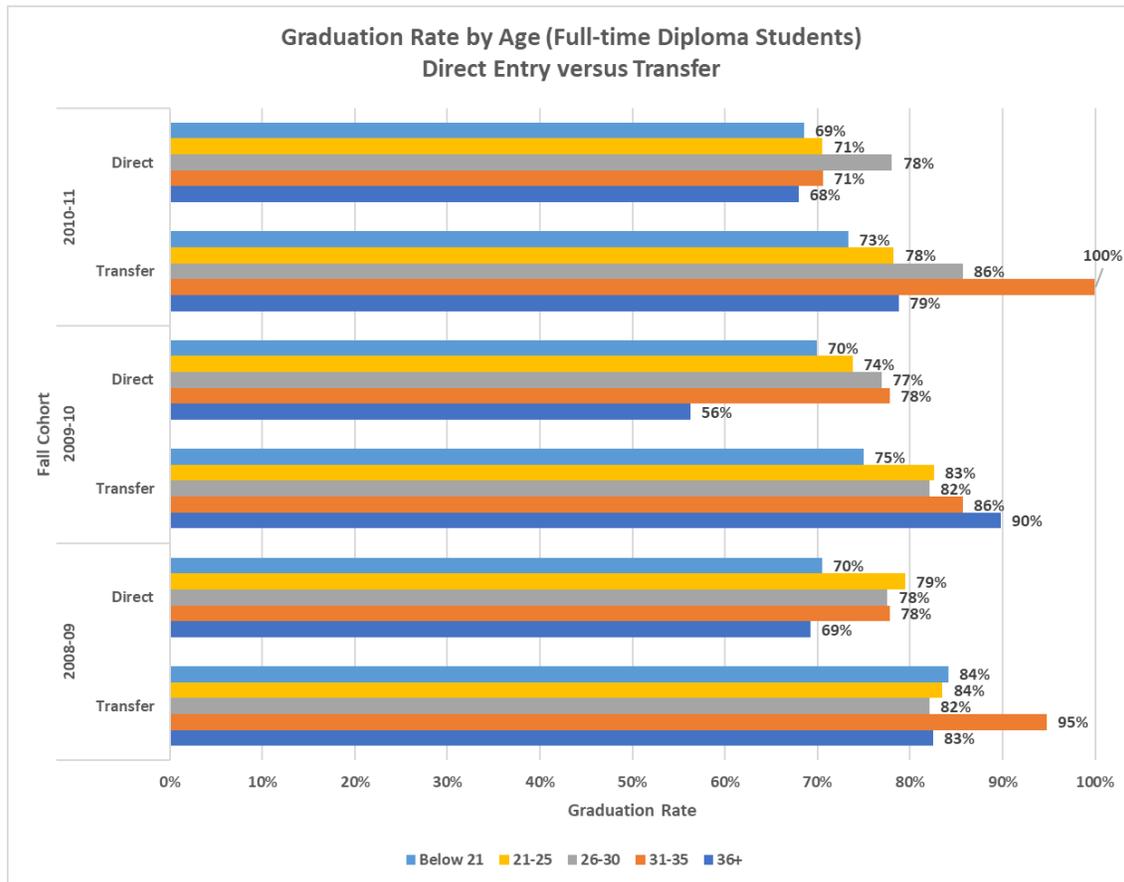
⁴⁹ It was not possible to conduct a similar comparison for degree candidates, undeclared students, or part-time students due to the smaller 'n' counts. These students were excluded from this analysis.

Table 22: Graduation Rate by Age Group - Full-time Diploma Students

Fall Cohort	Student Cohort	Below 21	21-25	26-30	31-35	36+	Total Student Cohort
2008-09	Transfer	53/63 (84%)	76/91 (84%)	23/28 (82%)	18/19 (95%)	33/40 (83%)	241
	Direct	919/1304 (70%)	480/604 (79%)	83/107 (78%)	28/36 (78%)	27/39 (69%)	2090
2009-10	Transfer	48/64 (75%)	76/92 (83%)	36/40 (82%)	18/21 (86%)	44/49 (90%)	266
	Direct	852/1218 (70%)	457/619 (74%)	90/117 (77%)	28/36 (78%)	18/32 (56%)	2022
2010-11	Transfer	33/45 (73%)	72/92 (78%)	30/35 (86%)	14/14 (100%)	26/33 (79%)	219
	Direct	878/1280 (69%)	448/635 (71%)	121/155 (78%)	24/34 (71%)	34/50 (68%)	2154

Those students who did not declare their age are excluded from this analysis; 'n' counts were adjusted accordingly.

Figure 30: Graduation Rate by Age Range (Full-time, Diploma Students)



Gender and Graduation Rates

In all Fall cohorts, male transfer students graduated at a higher rate versus direct entry male students (Figure 31, Table 23). The graduation rates of male transfer students declined from 83% for the Fall

2008-09 cohort, to 82% for 2009-10, and 76% for 2010-11. Male direct entry students also declined from 72% for the Fall 2008-09 cohort, to 68% for 2009-10, and 66% for 2010-11.

The female transfer cohort also graduated at a higher rate versus the female direct entry cohort in every Fall cohort (Figure 32, Table 24). The distinctions were less pronounced in the Fall 2010-11 cohort. In the Fall 2008-09 cohort, 86% of female transfer students versus 76% of female direct entry students graduated; 85% of transfers versus 77% of direct entry students in the Fall 2009-10 cohort graduated; and 76% of transfer students graduated versus 75% in the Fall 2010-11 cohort.

Apart from the Fall 2010-11 transfer student cohort, the data indicate female transfer students graduated at a higher rate than male transfer students (Figure 33). In every Fall cohort, both male and female transfer students graduated at a higher rate than direct entry students. Since males tended to have lower graduation rates for both transfer and direct entry students, it would be helpful in future research to validate if this occurring across the province. As the lower rates at NAIT existed in both transfer and direct entry categories, it would be helpful to explore in that research if the higher success of transfer males lends insights to inform research and supports for direct entry males; however, this line of enquiry sits outside the scope of this research.

Figure 31: Diploma Graduation Rate Comparison of Males - Transfer versus Direct Entry (Full-time)

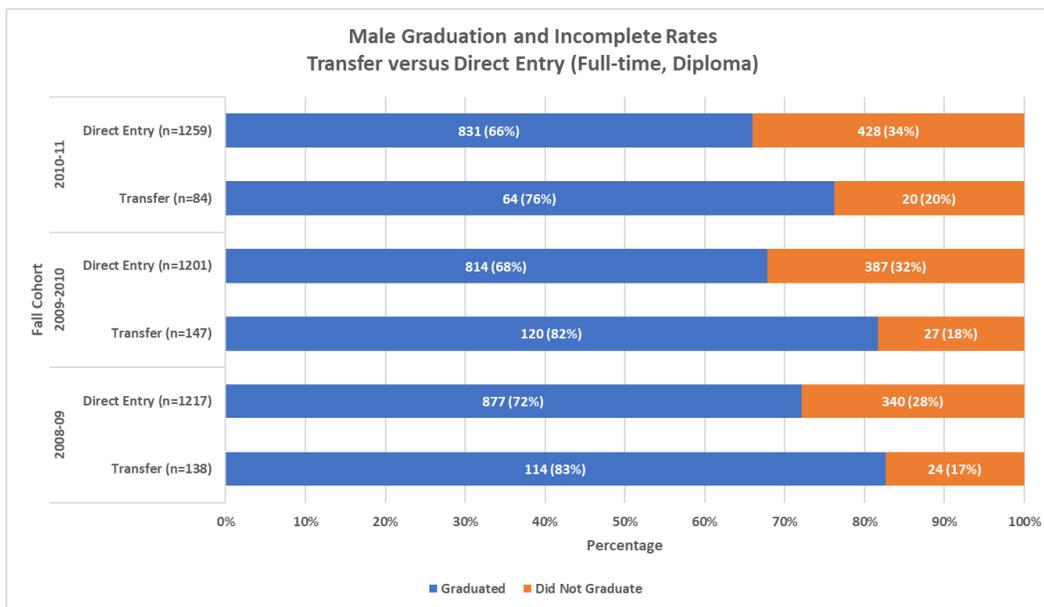


Table 23: Male Graduation and Incomplete Rates - Full-time Diploma Students

Fall Cohort	Student Cohort	Graduated	Did Not Graduate	Row Totals
2008-09	Transfer (n=138)	114 (83%)	24 (17%)	138
	Direct Entry (n=1217)	877 (72%)	340 (28%)	1217
2009-2010	Transfer (n=147)	120 (82%)	27 (18%)	147
	Direct Entry (n=1201)	814 (68%)	387 (32%)	1201
2010-11	Transfer (n=84)	64 (76%)	20 (24%)	84
	Direct Entry (n=1259)	831 (66%)	428 (34%)	1259

Figure 32: Diploma Graduation Rate Comparison of Females – Transfer versus Direct Entry (Full-time)

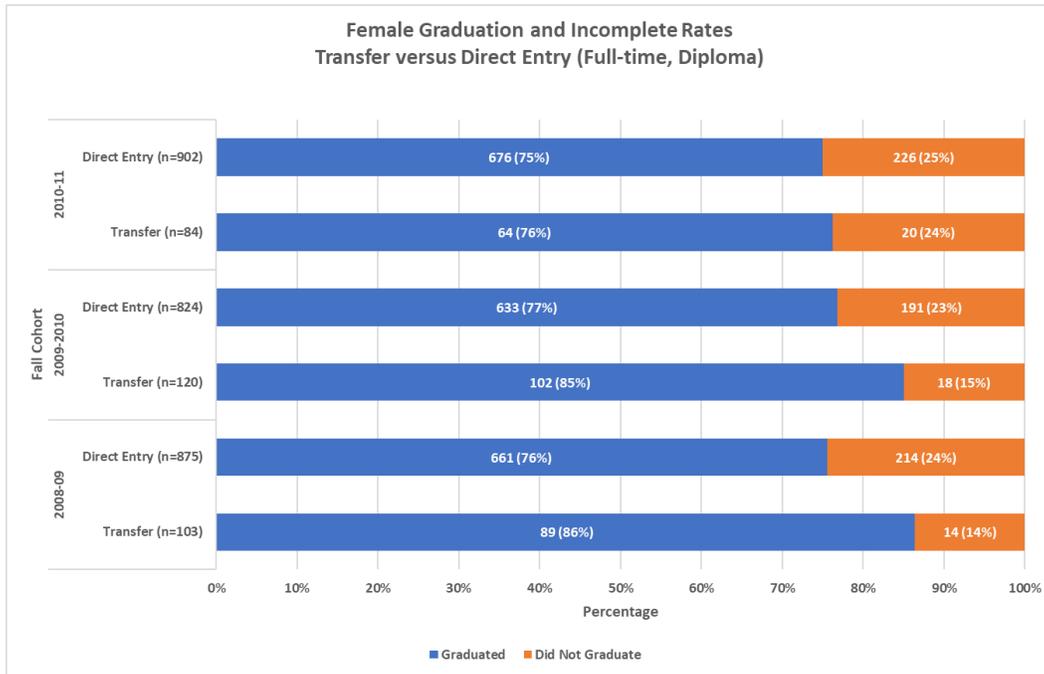
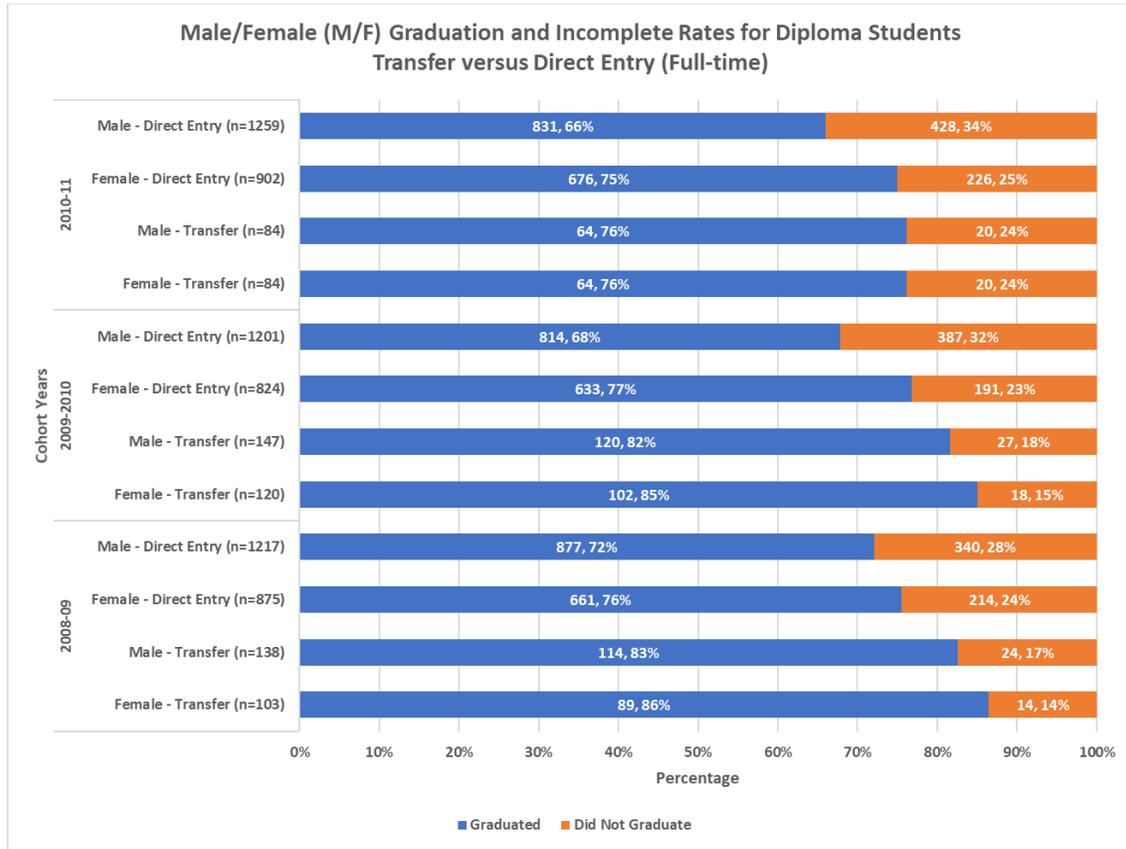


Table 24: Female Graduation and Incomplete Rates - Full-time Diploma Students

Fall Cohort	Student Cohort	Graduated	Did Not Graduate	Row Totals
2008-09	Transfer (n=103)	89 (86%)	14 (14%)	103 (100%)
	Direct Entry (n=875)	661 (76%)	214 (24%)	875 (100%)
2009-10	Transfer (n=120)	102 (85%)	18 (15%)	120 (100%)
	Direct Entry (n=824)	633 (77%)	191 (23%)	824 (100%)
2010-11	Transfer (n=84)	64 (76%)	20 (24%)	84 (100%)
	Direct Entry (n=902)	676 (75%)	226 (25%)	902 (100%)

Figure 33: Male/Female Graduation and Incomplete Rates - Diploma Students



New versus Returning Transfer Students

The Fall cohorts indicate a significant number of former NAIT students returned for additional studies particularly by enrolling in the degree programs (Figure 34).⁵⁰ Apart from the Fall 2008-09 cohort where overall small enrolments existed, the subsequent Fall cohorts included 12% and 13% new degree students. Diploma students tended to be newer to NAIT. For each Fall cohort, 67%, 57%, and 68% of the diploma students had no prior exposure to NAIT.

Degree Students -- Returning students enrolled in degree programs graduated at a higher proportional rate (88%) in each of the Fall 2009-10 and 2010-11 cohorts (Figure 35).⁵¹ In comparison, 84% and 72% of new students graduated for the same two cohorts.

Diploma Students -- For diploma programs, the graduation rate for returning NAIT students tracked ahead on a proportional basis to new NAIT students except for the Fall 2010-11 cohort (Figure 36). For that group, 72% of the former NAIT students graduated versus 84% of the new students. In the Fall 2008-09 cohort, returning NAIT students graduated at a higher rate (91% versus 81% new NAIT students graduated); there were fewer returning NAIT students who did not complete as a result (9% versus 19% new students). This difference evened out in the following Fall cohort with 85% of the Fall 2009-10 returning NAIT students graduating versus 82% of the new students graduating.

⁵⁰ Student cohort totals below 10 considered sensitive.

⁵¹ 'N' counts for 2008-09 new NAIT students considered sensitive.

Suggested future research includes capturing a stronger understanding of the impact that prior studies and other factors have on success towards graduation (e.g., finances, life circumstances, etc.).⁵²

Figure 34: Previous NAIT Transfer Students versus New to NAIT – Degree versus Diploma (Full-time)

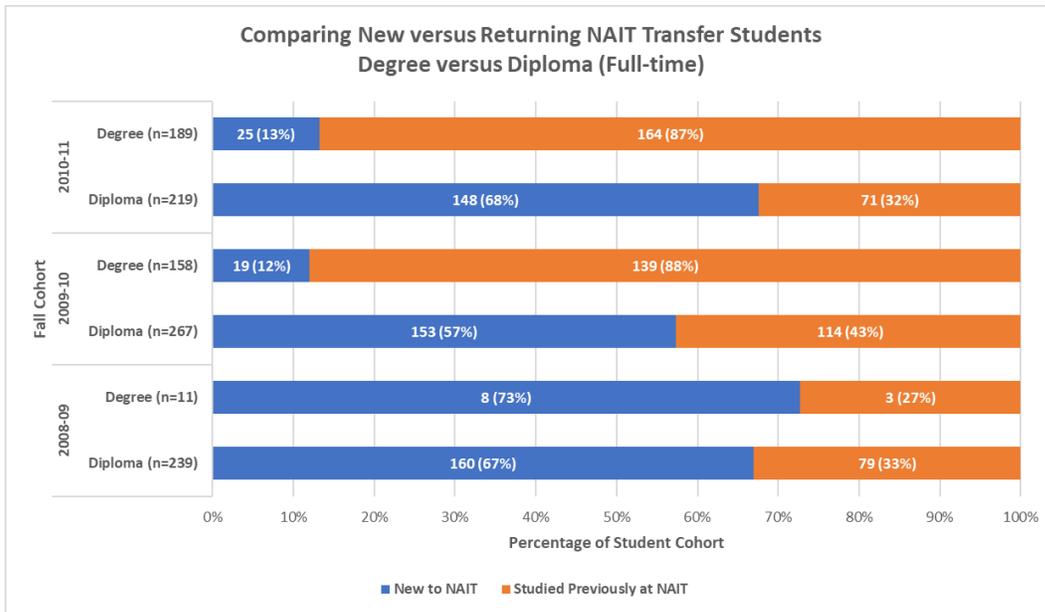
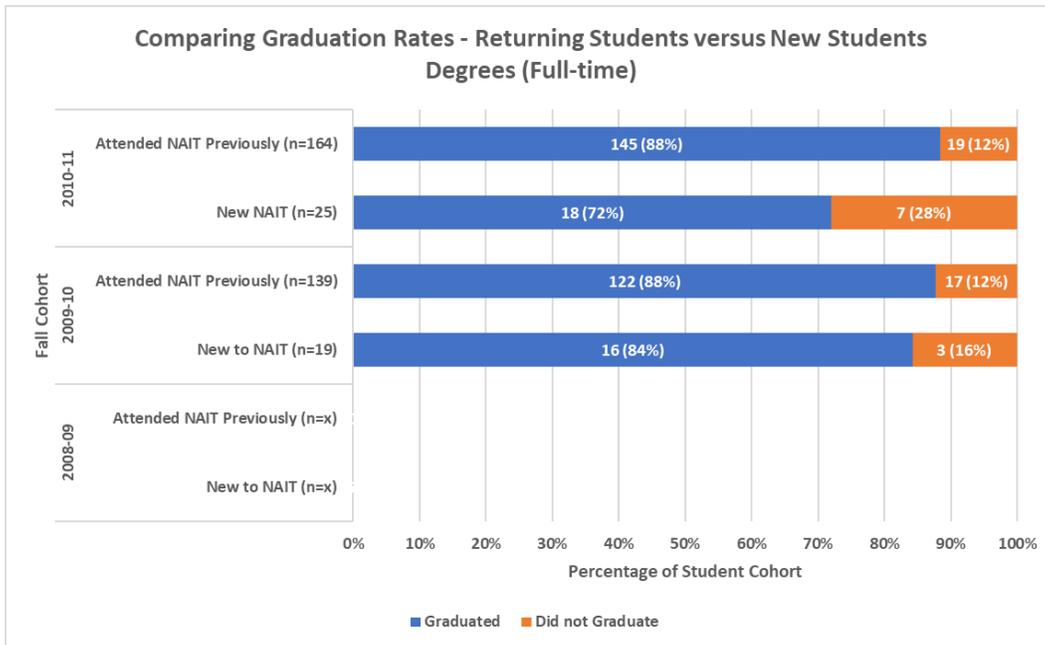
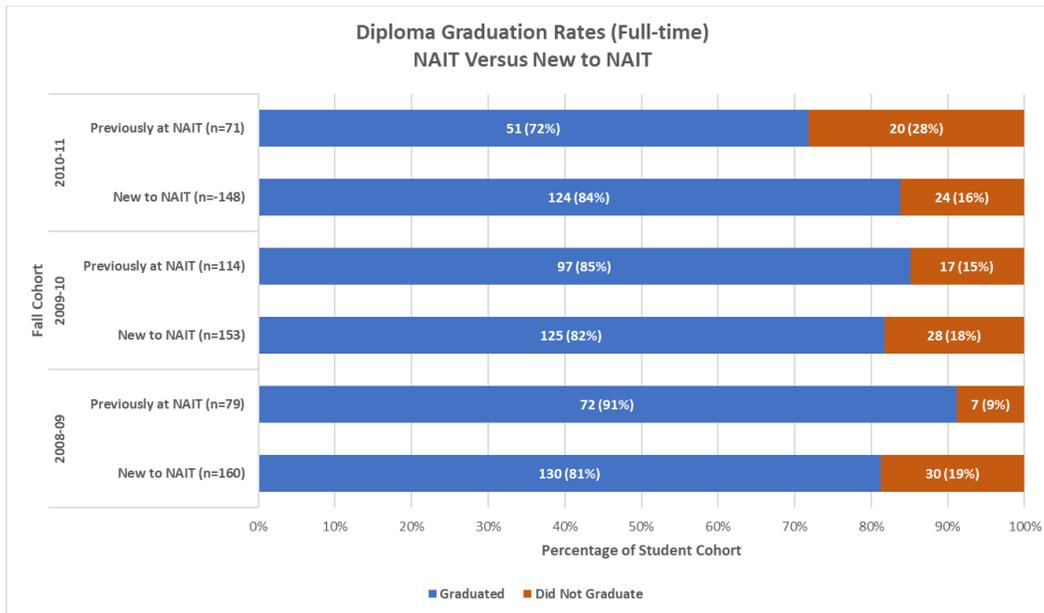


Figure 35: Comparing Graduation Rates for Degrees – Returning versus New Students (Full-time)



⁵² Source of prior studies at NAIT was not available to the research team.

Figure 36: Diploma Graduation Rates - New NAIT Transfer Students versus those with Prior NAIT Experience



Conclusion

The research intended to address two questions, 'How successful are transfer students at NAIT?' and 'Are transfer students successful in comparison to direct entry students?' Definitions of success to address these two questions included finding evidence transfer students achieved overall grade point averages (GPA) of 2.00 or higher at end of year one; that they graduated; or that they finished studies at NAIT with overall grade point averages of 2.00 or higher (i.e., left in good standing at last point of registration). The analysis also included identifying and comparing withdrawal, graduation and completion rates for transfer and direct entry students. The findings for NAIT across these dimensions suggest the answer to both questions is 'yes' for the most part, although there are variances evident and additional research needed.

The research study explored these questions by conducting a quantitative analysis of two primary control groups enrolled in NAIT applied degrees, degrees and diplomas who had been admitted to three Fall cohorts: Fall 2008-09, Fall 2009-10, and Fall 2010-11 (other entry points were excluded from the research data set). NAIT provided at least six years of anonymized student data to support the study. Within each, two primary student cohorts were analyzed and compared:

a) Direct entry students

Defined as students admitted to NAIT diploma, degree, and applied degree programs based on high school results who had no prior post-secondary level experience. The two students in the Fall 2009-10 cohort who received transfer credit for studies in the International Baccalaureate and Advanced Placement curriculum were included in this group.

b) Transfer students

Defined as any student admitted to NAIT diploma, degree, and applied degree programs with prior post-secondary exposure whether at a post-secondary institution or through non-formal workplace learning.

All other students including apprenticeship, certificates, and continuing education were excluded from the NAIT analysis.

NAIT underwent significant academic restructuring during the periods covered by this research. To avoid confusion, the researchers assigned each student using the new School nomenclature. The School of Skilled Trades and the School of Applied Sciences and Technology experienced the most restructuring; therefore, much of the School specific analyses focused on the School of Health Sciences and the JR Shaw School of Business (contained in Appendix D).

The research approach involved first establishing the institutional context and NAIT's admissions, grading, and graduation policies and practices. The next step involved determining the specific fields that would be most beneficial for addressing the two research questions all of which are specified in Appendix A. A transfer student profile was identified for NAIT from the research which facilitated comparisons to direct entry students. Metrics used included age, enrolment size and status, gender, citizenship, types of prior post-secondary experiences, and the amount of transfer credit awarded. Where possible, the data was analyzed according to credential type (i.e., degree versus diploma) and compared to the direct entry student cohort.

Success was examined by comparing average GPAs, completion rates, and graduation rates between direct entry and transfer students overall and for the two largest schools - Arts and Science. Completion and graduation rates were explored across other dimensions such as gender and source of prior post-

secondary studies. Tables 25 and 26 summarize the metrics examined, the findings, and the suggested topics and considerations for future research.

Based on the NAIT cohorts examined, transfer and direct entry students' average ages exceeded 19 years; therefore, this dimension was explored further in the context of success. Ultimately, the findings did not suggest age was a factor impacting success for either cohort.

NAIT enrolled a higher number of males in the School of Skilled Trades and the School of Applied Sciences and Technology versus Health and Business. Both male and female transfer students tended to graduate at higher rates in comparison to their direct entry counterparts; however, females for both transfer and direct entry graduated at higher rates when comparing across gender categories.

A significant number of former NAIT students returned to the institution for further studies. These NAIT students tended to graduate at a higher rate than transfer students new to NAIT. Several of these returning students enrolled in the degree programs and did so at a much higher volume than direct entry students.

While variations existed between Fall cohorts, particularly at the School level or when 'n' counts were low, the evidence indicates transfer students successfully achieved credential completion and strong average GPAs when pursuing NAIT credentials. While it was not the focus of this study, the data also confirmed the success of direct entry students. Both cohorts achieved lower average GPAs at the end of year one in most instances although not all for the transfer cohort. Direct entry and transfer students tended to improve by the last point of registration or graduation. Transfer students consistently graduated at higher rates versus direct entry students. Both cohorts consistently graduated within three years of beginning their studies. In conclusion, the findings suggest transfer students were successful and, moreover, tended to be as successful and at times more successful than direct entry students.

Significant opportunities exist to deepen the institutional research related to the success of transfer versus direct entry students with a focus on understanding the reasons behind some of the quantitative findings. Provincial level research may serve to validate the findings, provide a broader context from which to examine transfer student success, and potentially support broader policy development for the province. It may also lead to further opportunities to identify and share best practices amongst institutions beyond what is already occurring.

The Tables below provide several suggestions where further system wide research would be useful to deepen an understanding of transfer student success within Alberta and potentially allow for additional comparisons and benchmarking including at the national level. Having noted this, the intention of this study, the companion research conducted for a separate Alberta institution contained in the report called "*Transfer Student Success, a Profile of Transfer Student Success at the University of Calgary*", and the supporting report for the literature review called "*A Literature Review: Transfer Student Success and the University of Calgary and the Northern Alberta Institute of Technology*", involved using a case study approach of individual institutions as a beginning research foray into this area for the Alberta community. Neither of the institution's results should be compared as the UCalgary and NAIT studies represent separate, standalone research studies. Future research will want to consider this case-based approach to honour and reflect the diversity that exists within the province between the different institutional types and credentials.

An opportunity exists to establish baseline data findings at the provincial level for each institution to inform an understanding of the transfer student profiles both at NAIT and across the province, hence, the categorization of the sections within the Tables below. Such data would help to identify potential best practice and further policy development to support transfer student success both within

institutions and provincially. Again, any future research would want to avoid collapsing different institutional or credential types together when examining transfer student success.

Table 25: High-Level Overview of Findings and Suggested Future Research Considerations and Opportunities

Metrics	High-Level NAIT Findings	Future Research and Considerations Suggested
Enrolment Size and Status (Full-time, Part-time)	The direct entry class was much larger than the transfer class although the latter increased and captured a larger share of the overall enrolment in later Fall cohorts. More transfer students increasingly enrolled on a part-time basis within the Fall 2010-11 cohort exceeding the direct entry part-time class in absolute values.	<p>Potential exists to validate if this is occurring across the province or if NAIT, a polytechnic, experiences unique outcomes in this area.</p> <p>Establishing the enrolment differences between transfer and direct entry inform development of institutional and system level transfer profiles.</p> <p>Should part-time numbers grow, future research could consider examining the success of part-time transfer students and identifying any factors impeding success.</p>
Age	More transfer and direct entry students in the data set were 19 years or older at the point of entry. The transfer cohort consisted of slightly older students. Using 19 as the age marker between transfer and direct entry students did not lend any insights as both direct entry and transfer students at NAIT tended to be older. Twenty-one (21) represented a more relevant dividing line for NAIT.	<p>As above, a system level transfer profile research opportunity exists.</p> <p>Institutional context represents an important consideration in student success research. Amalgamating all institutions into one group may mask important differences. Future research at the provincial level will want to consider institutional type and the complexity of credentials, policies and practices when examining transfer student success to ensure the research process and findings reflect the diversity and complexity in the province.</p>
Gender	<p>More males versus females enrolled at NAIT in both the direct entry and transfer cohorts. However, the findings for Business and Health stand in contrast to the rest of NAIT. These two Schools enrolled a higher percentage of females.</p> <p>Lower 'n' counts for program enrolments impeded further analysis.</p>	<p>As above, a system level transfer profile research opportunity exists.</p> <p>Any future research at institutional or provincial levels will need to consider the potential for variations at School level and, if volumes allow, at the program level.</p>
Citizenship	NAIT enrolled more Canadian citizens. This was true for both transfer and direct entry students, with the transfer cohort data having proportionally higher percentages of international students (the direct entry cohort had higher absolute numbers).	<p>The contributions transfer efforts make towards diversifying the global reach of an institution represents an area of future study both at the institutional and provincial levels.</p> <p>As a consideration, institutions may not capture historical changes in status within individual student information systems. Such data are reported to the Ministry on an annual basis.</p>
Credential Types	NAIT offers an array of credential types. The analyses considered the overall experiences and credential specific findings to inform outcomes.	Any future research would want to ensure 'like' credentials were compared when considering transfer student success.

Table 26: Findings and Sample Areas for Future Research across Different Dimensions

Metrics	High-Level NAIT Findings	Future Research and Considerations Suggested
Graduation Rates	Degrees and Diplomas - Transfer students in both credentials graduated at higher rates versus direct entry students.	As above, a system level transfer profile research opportunity exists. Potential exists to validate if this is occurring across the province to inform institutional and system level policy development.
Source of Prior Post-Secondary	<ul style="list-style-type: none"> • A subset of the NAIT transfer student cohort previously attended a college or institute with university following as the second largest sending institution type. • A subgroup of transfer students, particularly in later years, attended NAIT prior to the years covered by this study. • NAIT drew most of its post-secondary transfers from within Alberta. • A small subset of transfer students attended more than one post-secondary institution prior to entering NAIT. 	<p>Overall student mobility research opportunity exists to examine student movement between credential levels at the same institution (returning students).</p> <p>Examining sending and receiving institutions would be a potential area of future study to better understand the overall student movement in the province; however, institutional practices for capturing prior institutional information may not be consistent or available within student information systems. Doing so will require data standards to be agreed upon to facilitate the data collection and analysis process.</p>
Completion Rates	Degrees and Diplomas - Most transfer and direct entry students graduated within three years and successfully achieved completion.	Potential exists to validate if this is occurring across the province and to examine what types of curricular structures facilitate transfer student success. NAIT's approach for its degree programs appears to serve as a model.
Withdrawal Rates	Degrees - NAIT transfer students pursuing degrees withdrew at a proportionally lower rate than NAIT direct entry students	Potential exists to validate if this is occurring across the province or if NAIT, a polytechnic, experiences unique outcomes in this area. Further potential exists to identify which curricular structures, if any might facilitate transfer completion.
Number of prior post-secondary institutions attended	Proportionally more diploma students studied in more than one institution prior to attending NAIT.	<p>This represents an area for institutional and province wide research to examine students who attend more than one post-secondary institution as a distinct transfer group with potentially different experiences and needs from those that transfer only once.</p> <p>Potential exists to examine student movement across the province similar to the Student Transitions Study in BC to facilitate a broader understanding of student movement in the province.</p>
Evidence of transfer credit awarded overall	NAIT awarded approximately half a term of course specific transfer credit towards the diploma. For its degree programs, it employs a block transfer model such that those with completed diploma programs enter directly into third year of the applied degree programs. A significant proportion of the degree/applied degree enrolment in the cohorts examined was attributable to	Potential exists to examine curricular structures for degrees and applied degrees in the province to determine their potential for laddering students between credentials.

Metrics	High-Level NAIT Findings	Future Research and Considerations Suggested
	returning NAIT students suggesting the success of these curricular models.	
Evidence of transfer credit awarded for non-formal workplace learning	NAIT admitted a small number of students who received transfer credit for non-formal workplace training. While the 'n' counts were small, this group would benefit from future research to inform an understanding of success related to partnerships with the private and not-for-profit sectors.	Potential exists for future institutional and system wide research to identify ways to partner with industry to develop and recognize other forms of prior learning.
Age and Graduation Rates	Without exception, the transfer student graduation rate for diploma students was higher in comparison to direct entry diploma students within all age categories. Age does not appear to be a contributing factor impacting on transfer student success.	Opportunity exists to identify provincial level transfer profiles using metrics such as age and gender to benchmark between 'like' institutions and credentials, and with other provinces to heighten understanding of the transfer student profiles and subsequent experiences.
GPA Performance at end of year one and at last point of registration	<p>Average entering GPA and number of credits awarded were not available to the researchers; therefore, the average GPA at end of year one and at last point of registration/graduation informed the analysis.</p> <p>The average GPA analyses indicate both transfer and direct entry students were successful although at times transfer students performed at the same or higher level than direct entry students. Variances existed by credential:</p> <p>a/ Degrees - Transfer students pursuing degrees performed at relatively the same level as direct entry students. When examining the average GPA of only those who graduated, both performed well; however, direct entry students performed at a higher level.</p> <p>b/ Diplomas - Both student cohorts were successful; however, transfer students consistently maintained higher average GPAs across the three cohorts.</p> <p>Transfer and direct entry degree students tended to experience lower averages at the end of first year versus at last point of registration regardless of final status.</p>	<p>Potential exists to validate average GPA outcomes across the province for transfer students to demonstrate transfer student success as a key metric.</p> <p>Note: how institutions calculate grade point averages varies and is impacted by local policy and system capturing practices. These nuances should be considered when exploring further research in this area.</p>
GPA and Graduation Rates	When focusing on graduated students only, both transfer and direct entry students performed at even higher performance levels as measured by average GPA at end of first year and at point of graduation with direct entry students tending to improve the most.	Potential exists to validate if this is occurring across the province.

Metrics	High-Level NAIT Findings	Future Research and Considerations Suggested
Average GPA with a School Level Focus	<p>Business Diplomas - Both direct entry and transfer graduates enrolled in Business diploma programs achieved average GPAs well above 2.00 indicating successful performance. In each Fall cohort, transfer students performed at a higher level as measured by average GPA. Unlike direct entry students, transfer students declined in absolute numbers.</p> <p>Health Diplomas - Both direct entry and transfer graduates enrolled in the Health diploma achieved average GPAs well above 2.00. Apart from the Fall 2008-09 cohort, Health transfer students performed at higher levels than direct entry students as measured by average GPA.</p>	
Gender and Graduation Rates	<p>Diplomas - The female transfer cohort graduated at a higher rate versus the female direct entry cohort in every Fall cohort. Variations existed at the School level although they still graduated at a higher level.</p> <p>Diplomas - Male transfer students graduated at a higher rate versus direct entry male students.</p> <p>Having noted this, males tended to have proportionally lower graduation rates than females for both transfer and direct entry students. Fluctuations existed at the School level although male transfer graduation rates versus direct entry male rates remained at a proportionally higher level except for one Fall cohort group.</p>	<p>Examining the circumstances of males more closely would be helpful future research both at the institutional and provincial level to determine if a larger percentage are not graduating. If further research validates the NAIT findings, the higher success of transfer males might lend insights to inform policy development and supports for direct entry males.</p>
Returning NAIT Students	<p>A proportion of the Fall 2009-10 and 2010-11 cohorts attended NAIT prior to the periods covered by this study. Degree and Applied Degrees enrolled most of these students.</p>	<p>As with above, potential exists to conduct future research at the institutional and system levels that explores returning transfer students to inform development of curricular structures that facilitate transfer between credential levels.</p>
Returning NAIT Students and Graduation Rates	<p>Diplomas - Overall, returning NAIT transfer students graduated at a higher rate than transfer students new to NAIT for two of the three Fall cohorts.</p>	

Appendix A – Data Fields

Field	Explanation
ID	Masked Student ID (Original ID kept with home institution with no access provided to researcher)
BIRTHDATE	Date of Birth
GENDER	Male, Female, Unknown
CITIZENSHIP	Current Citizenship Status
ADMIT PROGRAM	Program to which a student was admitted.
ADMIT CREDENTIAL	The credential associated with the program to which the student was originally admitted
FACULTY/SCHOOL FOR ADMIT PROGRAM	The original NAIT school linked to the program prior to academic restructuring
NEW FACULTY HOME	New Faculty home after restructuring
F/T P/T STATUS	Full-time or part-time status of student ('F' or 'P')
FALL 2010 WINTER 2011 COMBINED GPA	GPA calculated for the Fall and Winter terms, for students admitted into the Fall term. A blank value indicates a student withdrew, took one or more non-graded courses (Pass/Fail) (i.e. Practicum), or audited courses.
CUMULATIVE GPA	Calculates the GPA based on the admit term and all subsequent terms up to the last point of registration (or graduation). A blank value means the student withdrew, took one or more non-graded courses (Pass/Fail) (i.e. Practicum), or audited courses.
TRANSFER CREDIT COURSES AWARDED WHEN ADMITTED	Number of transfer courses awarded upon admission.
WITHDRAWN - ADMIT PROGRAM	Identifies whether a student withdrew from a program.
GRADUATED - ADMIT PROGRAM	Identifies whether a student graduated.
GRAD DATE	Student graduation date.
WITHDRAW DATE	Student withdrawal date.
ELIGIBLE TO PROCEED	Tracks whether the student is still active in the same program to which they were admitted.
CURRENT STATUS	Similar to Eligible to Continue column. The status is 'Active' if the student has not graduated or withdrawn.
TRANSFER CREDIT INSTITUTES AT ADMIT TERM	The institutes from which transfer credits were granted when admitted. More than one institution may be noted in the same field.

Appendix B – School and Program Summary for Students Enrolled During the Period of the Study

Program Description	Applied degree	Degree	Diploma	Original School
Now called 'School of Health and Life Sciences'				
Animal Health Technology (AHT)			x	School of Health Sciences
Lab & X-Ray Technology Combined (CLX)			x	School of Health Sciences
Cytotechnology (CYT)			x	School of Health Sciences
Denturist Technology (DET)			x	School of Health Sciences
Diagnostic Medical Sonography (DMS)			x	School of Health Sciences
Emergency Medical Technology Paramedics (EMTX)			x	School of Health Sciences
Medical Laboratory Technology (MLT)			x	School of Health Sciences
Magnetic Resonance (MRD)			x	School of Health Sciences
Medical Radiologic Technology (MRT)			x	School of Health Sciences
Personal Fitness Trainer (PFT)			x	School of Health Sciences
Respiratory Therapy (RET)			x	School of Health Sciences
Now called 'JR Shaw School of Business'				
Business Administration – Accounting (ACC)			x	School of Business
Bachelor of Applied Business Administration (ADA)	x			School of Business
Bachelor of Applied Business Administration – Finance (ADF)	x			School of Business
Bachelor of Business Administration (BBAM)		x		School of Business
Business Administration (BUS)			x	School of Business
Entrepreneurship and Innovation (EIM)			x	School of Business
Business Administration – Finance (FIN)			x	School of Business
Business Administration - Human Resource Management (HRM)			x	School of Business
Business Administration – Management (MAN)			x	School of Business
Business Administration – Marketing (MAR)			x	School of Business
Records Management & Business Operations (RIM)			x	School of Business
Now within the 'School of Skilled Trades'				
Building Environmental Systems Technology (BET)			x	School of Mechanical & Manufacturing Technology
Industrial Heavy Equipment Technology (IHE)			x	School of Mechanical & Manufacturing Technology
Heavy Equipment Service (HES)			x	School of Mechanical & Manufacturing Technology
Heavy Equipment Service (HESB)			x	School of Mechanical & Manufacturing Technology
Culinary Arts (CUA)			x	

Program Description	Applied degree	Degree	Diploma	Original School
Now within the 'School of Applied Sciences and Technology'				
Mechanical Engineering Technology (MEC)			x	School of Mechanical & Manufacturing Technology
Biological Sciences (BST)			x	School of Resources & Environmental Management
Biological Sciences Technology - Environmental Sciences (BSTE)			x	School of Resources & Environmental Management
Biological Sciences Technology - Laboratory & Research (BSTL)			x	School of Resources & Environmental Management
Bachelor of Technology (BTE)		x		School of Resources & Environmental Management
Chemical Technology (CHT)			x	School of Resources & Environmental Management
Chemical Engineering Technology (CMTC)			x	School of Resources & Environmental Management
Forest Technology (FOT)			x	School of Resources & Environmental Management
Geological Technology (GTN)			x	School of Resources & Environmental Management
Occupational Health and Safety (OHSD)			x	School of Resources & Environmental Management
Petroleum Engineering Technology (PNT)			x	School of Resources & Environmental Management
Materials Engineering Technology (MET)			x	School of Mechanical & Manufacturing Technology
Power Engineering Technology (PWT)			x	School of Mechanical & Manufacturing Technology
Avionics Engineering Technology (AET)			x	School of Elec & Electron Tech
Biomedical Engineering Technology (BET)			x	School of Elec & Electron Tech
Computer Engineering Technology (CNT)			x	School of Elec & Electron Tech
Electronics Engineering Technology (ELT)			x	School of Elec & Electron Tech
Electrical Engineering Technology (ELT)			x	School of Elec & Electron Tech
Instrumentation Engineering Technology (IET)			x	School of Elec & Electron Tech
Network Engineering Technology (NET)			x	School of Elec & Electron Tech
Telecommunications Engineering Technology (TET)			x	School of Elec & Electron Tech
Captioning and Court Reporting (COR)			x	School of Arts, Science and Communications
Architectural Technology (ART)			x	School of Applied Building Science
Civil Engineering Technology (CIV)			x	School of Applied Building Science
Construction Engineering Technology (CON)			x	School of Applied Building Science
Civil Engineering Technology Co-op (CVC)			x	School of Applied Building Science
Engineering Design & Drafting (EDD)			x	School of Applied Building Science
Geomatics Engineering Technology (GET)			x	School of Applied Building Science
Interior Design Technology (IDT)			x	School of Applied Building Science
Landscape Architectural Technology (LAT)			x	School of Applied Building Science
Bachelor of Applied Information Systems (BAI)	x			School of Applied Media & Information Technology
Bachelor of Applied Information Systems Technology (BAIW)	x			School of Applied Media & Information Technology
Computer Systems Tech Co-op (CSCC)			x	School of Applied Media & Information Technology
Computer Systems Technology (CST)			x	School of Applied Media & Information Technology
Digital Media Design (DMD)			x	School of Applied Media & Information Technology
Digital Media and IT (DMIT)			x	School of Applied Media & Information Technology

Program Description	Applied degree	Degree	Diploma	Original School
Now within the 'School of Applied Sciences and Technology'				
Photographic Technology (PHT)			x	School of Applied Media & Information Technology
Radio (RTR)			x	School of Applied Media & Information Technology
Television (RTT)			x	School of Applied Media & Information Technology
Biological Sciences Renewable Resources (BSTR)			x	School of Arts, Science and Communications

Appendix C – Full-time Enrolments by School, by Program (All Credentials)

Table 27: Transfer Degree/Applied Degree Enrolments by School, by Program (Full-time)

Transfer – Degrees/Applied Degrees	2008-09	2009-10	2010-11
Program	Full-time	Full-time	Full-time
JR Shaw School of Business	x	143	167
ADA 5	x	2	2
ADA 6	x		
ADF 5		1	
ADF 7			
BBAM		140	165
BBAM1	x		
BBAM3	x		
School of Applied Science and Technology	x	15	22
BAI 5	x	9	7
BAIW7			
BTE		6	15
BTE 1	x		
Grand Total	x	158	189

Table 28: Direct Entry Degree/Applied Degree Enrolments (Full-time)

Direct Entry - Degrees/Applied Degrees	2008-09	2009-10	2010-11
Program	Full-time	Full-time	Full-time
JR Shaw School of Business	100	94	95
ADA 5	49	39	34
ADA 6	2	4	12
ADA 8	2	1	3
ADF 5	16	17	
BBAM		33	46
BBAM1	31		
School of Applied Sciences and Technology	34	42	23
BAI 5	18	29	22
BAIW7			
BTE		13	1
BTE 1	16		
Grand Total	134	136	118

Table 29: Transfer Diploma Enrolments by School, by Program (Full-time)

Transfer - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
JR Shaw School of Business	79	83	68
ACC 3	10	6	7
ACC 4	1		2
BUS 1	44	51	37
BUS 2	16	11	15
EIM 3	1		
FIN 3	3	5	2
HRM 3		4	2
MAN 3	2	3	
MAR.4		1	
OAD 1	1		1
Unk	1	2	2
School of Health Sciences	36	24	30
AHT 1			2
CLX 1	5	3	2
CYT 1	2		2
DET 1		1	
DMS 1	1	1	1
EMT 1			5
MLT 1	10	4	6
MRD 1	1	2	
MRT 1	10	8	4
PFT 1	2	3	6
RET 1	4	2	2
RET 3	1		
School of Skilled Trades		x	
CUA 3		x	
IHE 1		x	

Transfer - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
School of Applied Science and Technology	126	156	121
ART 1	6	4	5
ART 3	1		
BET 1			
BST 1	2	2	3
BSTE3		1	
BSTL3		1	
CHT 1	4	2	3
CHT 3			2
CIV 1	19	18	9
CIV 3		2	
CMT 1	1		8
CMT 3	1	2	4
CNT 1		1	
CON 1	9	4	5
CSCC3			
CSCC4			
CST 1	5		
CST 2	1	3	
CVC 4	1		
DMIT1		13	13
EDD 1	12	4	6
EDD 3		1	
EET 1	1	1	2
ELT 1		4	6
GET 1	2	1	2
GTN 1			6
GTN 3	4		
IDT 1	3	1	2
IDT 3		1	
IET 1	6	13	14
IET 2	14	2	3
IET 3	1	4	5
LAT 1	2		1
MEC 1	10	6	5

Transfer - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
School of Applied Science and Technology	126	156	121
NAN 1			1
NET 1			2
OHSD1		3	
OHSD4		24	
OHSD5		20	
PHT 1	1		5
PNT 1	10	8	6
PNT 3	1	3	1
PWT 1	2	1	
RTR 1	1	2	1
RTT 1	2	2	1
TET 1	3	2	
TET 3	1		
Grand Total	241	267	219

Table 30: Direct Entry Diploma Enrolments (Full-time)

Direct Entry - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
JR Shaw School of Business	793	784	754
ACC 3	150	142	111
ACC 4		2	1
BUS 1	420	380	437
BUS 2	4	4	4
EIM 3	1		
FIN 3	55	59	60
FIN 4	4	7	3
HRM 3	39	45	35
HRM 4	1	3	1
MAN 3	30	47	47
MAN 4		1	1
MAR.4	68	86	46
OAD 1	21	8	8
School of Health Sciences	261	222	271
AHF 1	13		
AHT 1	26	23	25
CLX 1	24	24	31
CYT 1	4	3	2
DET 1	9	7	9
DLT 1	10	7	13
DMS 1	20	17	25
EMT 1	16	8	7
MLT 1	15	14	19
MRD 1	11	12	13
MRT 1	31	24	34
PFT 1	47	44	52
PFT 3	1		
RET 1	34	39	41
School of Trades	41	24	27
BES 3	11	8	6
HES 1	7		
HESB1	8		
IHE 1	15	16	21

Direct Entry - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
School of Applied Sciences and Technology	997	995	1109
AET 1	13	18	18
ART 1	76	79	73
BET 1	14	14	16
BST 1	42	36	54
BSTE3	1		
BSTR3			1
CHT 1	38	37	38
CIV 1	59	49	56
CMT 1	28	27	28
CNT 1	35	32	36
CON 1	42	41	50
COR 1	10	14	18
CSCC3			
CSCC4			
CST 1	79		
CST 2	1	1	
CST 3		2	
CVC 4	1	1	
DMD 1	65		
DMIT1		158	162
DMIT3			1
EDD 1	37	25	41
EET 1	24	23	32
EET 2			1
ELT 1	41	33	29
FOT 1	23	22	25
FOT 3	2		1
GET 1	19	16	20
GTN 1	23	20	23
IDT 1	19	22	29
IET 1	65	53	56
LAT 1	25	26	23
MEC 1	56	67	64
MET 1	20	17	15

Direct Entry - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
NAN 1			20
NET 1	12	16	15
NET 3	2		
OHSD1		17	20
OHSD4		2	
PHT 1	20	16	16
PNT 1	26	31	35
PNT 3			1
PWT 1	45	44	51

Direct Entry - Diploma	2008-09	2009-10	2010-11
Program	Fulltime	Fulltime	Fulltime
RTR 1	9	9	10
RTT 1	12	14	16
TET 1	13	13	15
Grand Total	2092	2025	2161

Appendix D - School Specific Success – JR Shaw School of Business, School of Health and Life Sciences

Overall Enrolments

The earlier School Profile section outlined the enrolments comparing transfer and direct entry students; however, to facilitate examination of success metrics, Table 31 provides the data highlighting the JR Shaw School of Business and Health and Life Sciences enrolments. Beginning with the Fall 2008-09 cohort, 47%, 59%, and 65% of the transfer students enrolled in these schools versus 52%, 51% and 49% of the entire direct entry students in each of the Fall cohorts respectively.⁵³ For both transfer and direct entry students, Business and Health Sciences represent reasonable groupings for examining success.

Subsequent school analyses focus on diploma programs primarily unless specifically noted.

Table 31: Full-time Business and Health Direct Entry versus Transfer Students (Full-time)

Schools	Fall 2008-09		Fall 2009-10		Fall 2010-11	
	Direct Entry	Transfer	Direct Entry	Transfer	Direct Entry	Transfer
Business	893	84	878	226	849	235
Applied Degree	69	3	61	3	49	2
Degree	31	2	33	140	46	165
Diploma	793	79	784	83	754	68
Health Sciences	261	36	222	24	271	30
Diploma	261	36	222	24	271	30
Total Business & Health Students	1154	120	1100	250	1120	265
Total Other Schools & Depts.	1072	133	1061	175	1159	143
% of Overall Population (Business and Health)	52%	47%	51%	59%	49%	65%
Total Students in Study	2226	253	2161	425	2279	408

GPA

Both direct entry and transfer graduates enrolled in Business diploma programs achieved average GPAs well above 2.00, indicating successful performance (Table 32). In each Fall cohort, transfer students performed at a higher level as measured by average GPA. Unlike direct entry students, they experienced declines in absolute numbers.

As with the Business students, both direct entry and transfer graduates previously enrolled in Health diploma programs achieved average GPAs well above 2.00 (Table 33). By comparison, Health average GPAs were notably higher than those found in Business. Apart from the Fall 2008-09 cohort, Health transfer students performed at higher levels than direct entry students as measured by average GPA.

⁵³ The increase in enrolments for degree candidates in the Fall 2009-10 and Fall 2010-11 cohorts was directly attributable to the introduction of the new degrees.

Table 32: Average GPA – Business, Diploma, Full-time Graduates – Transfer versus Direct Entry

Fall Cohort	Student Cohort	Avg GPA			Total Students
		At End of Year One	At Graduation	Difference	
2008-09	Transfer	2.95	2.87	-0.08	63
	Direct Entry	2.63	2.67	0.04	541
2009-10	Transfer	2.80	2.78	-0.02	60
	Direct Entry	2.52	2.61	0.09	526
2010-11	Transfer	2.74	2.73	-0.01	46
	Direct Entry	2.51	2.59	0.08	495

Table 33: Average GPA – Health, Diploma, Full-time Graduates - Transfer versus Direct Entry

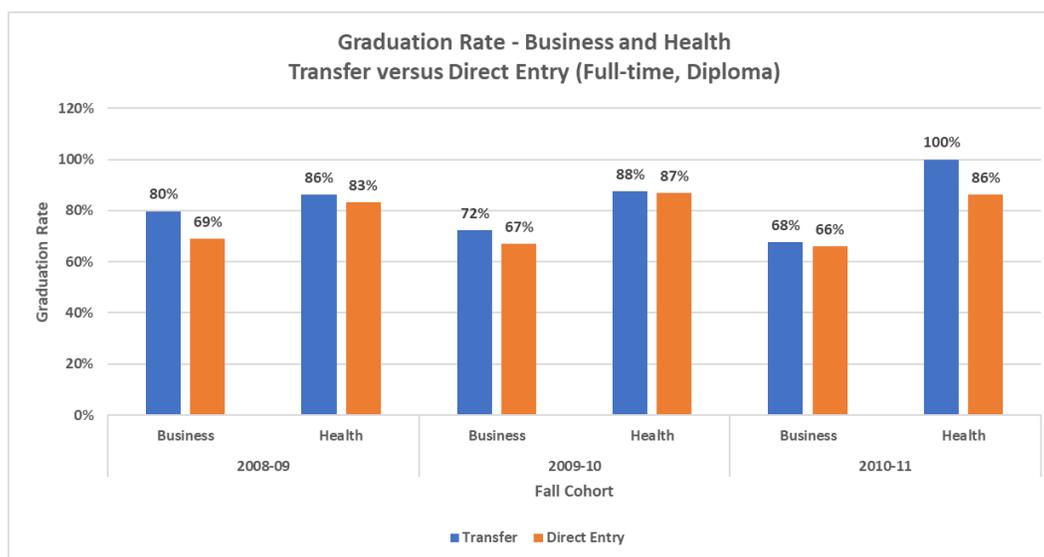
Fall Cohort	Student Cohort	Avg GPA			Total Students
		At End of Year One	At Graduation	Difference	
2008-09	Transfer	3.52	3.47	-0.05	31
	Direct Entry	3.53	3.49	-0.04	216
2009-10	Transfer	3.73	3.63	-0.10	21
	Direct Entry	3.52	3.53	0.01	192
2010-11	Transfer	3.60	3.61	0.01	30
	Direct Entry	3.54	3.53	-0.01	233

Overall Graduation Rates

Transfer diploma students versus direct entry students enrolled in Business and Health graduated at proportionally higher rates (Figure 37).

- *Business Diplomas* -- For Fall 2008-09, transfer students graduated at a rate of 80% versus direct entry students at 69%. For the Fall 2009-10 cohort, the graduation rate for transfer students fell at 72% versus direct entry students at 67%. In the final cohort group, the graduation rates between the two student groupings were similar (68% for transfer; 66% for direct entry).
- *Health Diplomas* -- Apart from the Fall 2010-11 cohort where there was a 100% transfer student graduation rate versus 86% direct entry, the other Fall cohorts saw somewhat similar rates for transfers versus direct entry.

Figure 37: Diploma Graduation Rates – Business, Health Transfer versus Direct Entry (Full-time)



Gender Profile at the School Level

The gender composition of transfer and direct entry students varies by school.

- **Business, All Credentials** -- A larger proportion of female transfers across all credentials enrolled in Business in comparison to other schools for the Fall 2009-10 and 2010-11 cohorts (Figure 38).⁵⁴ The Fall 2008-09 cohort experienced much lower enrolments in large part due to the low 'n' counts of the degree program. The larger female enrolment held true when separately examining diplomas but not necessarily for degrees (Tables 34, 35). More male transfers enrolled in Business in these same Fall cohorts except in the Fall 2008-09 cohort, where the opposite was true (Figure 39).
- **Health, All Credentials** -- Apart from the Fall 2008-09 cohort where a larger proportion of female transfer students enrolled, Health experienced smaller percentages of female transfer students in comparison to direct entry in the subsequent Fall cohorts (Figure 38). Very small percentages of males enrolled in the program (Figure 39, Tables 34 and 35).
- **Applied Sciences and Technology, All Credentials** – More female direct entry students studied in this school versus female transfer students in any of the Fall cohorts examined (Figure 38). On a proportional basis, direct entry males across all credentials enrolled in larger numbers in the school for the Fall 2009-10 and 2010-11 cohorts in comparison to transfer students (Figure 39).
- **Trades, All Credentials** -- Of the full-time students, most Trades students were in the direct entry student category for each Fall cohort (Fall 2008-09 = 41; Fall 2009-10 = 24; Fall 2010-11 = 27). Four transfer students were enrolled in Fall 2009-10.⁵⁵ When there was enrolment in the School of Skilled Trades, the students were predominantly male whether for direct entry or transfer (Figure 39).

⁵⁴ Given low 'n' counts for female Trades students, these numbers were not included in the analysis.

⁵⁵ There were no part-time transfer or direct entry Trades students enrolled in the Fall cohorts examined for this study.

The findings for Business and Health stand in contrast to the rest of NAIT. The other two schools enrolled mostly male students (Figure 40, Table 36).⁵⁶ For example, in the Fall 2010-11 cohort, the other schools not including Business enrolled 23% females and 67% males as direct entry students versus Health Sciences, which enrolled 76% females and 18% males. In this same Fall cohort for Business, male transfer students equaled female transfer students at 4% each, which is an anomalous finding. In all other Fall cohorts, female transfers outpaced males for Business diploma students.

Figure 38: Female Transfers versus Direct Entry Students (Full-time, All Credentials)

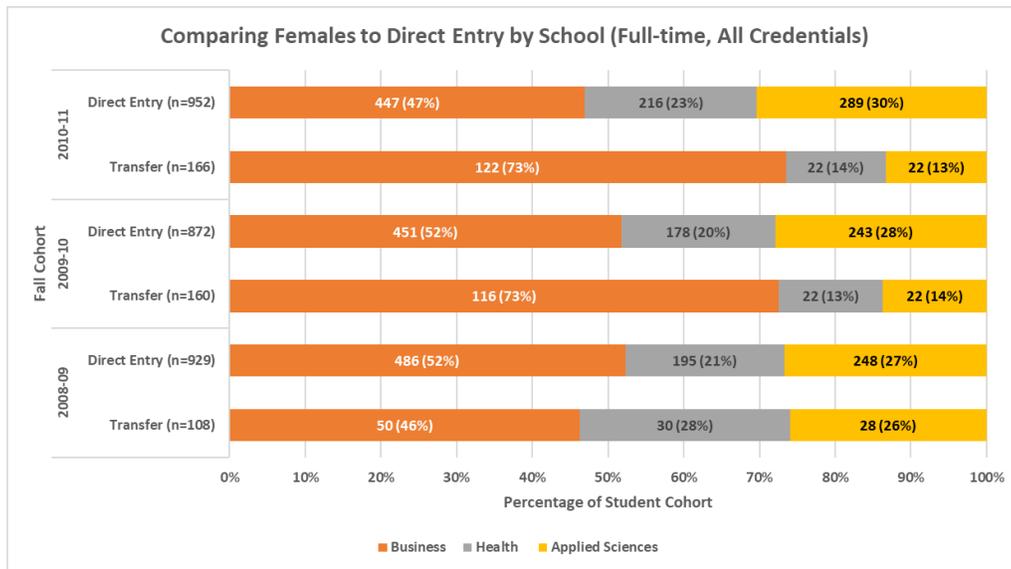
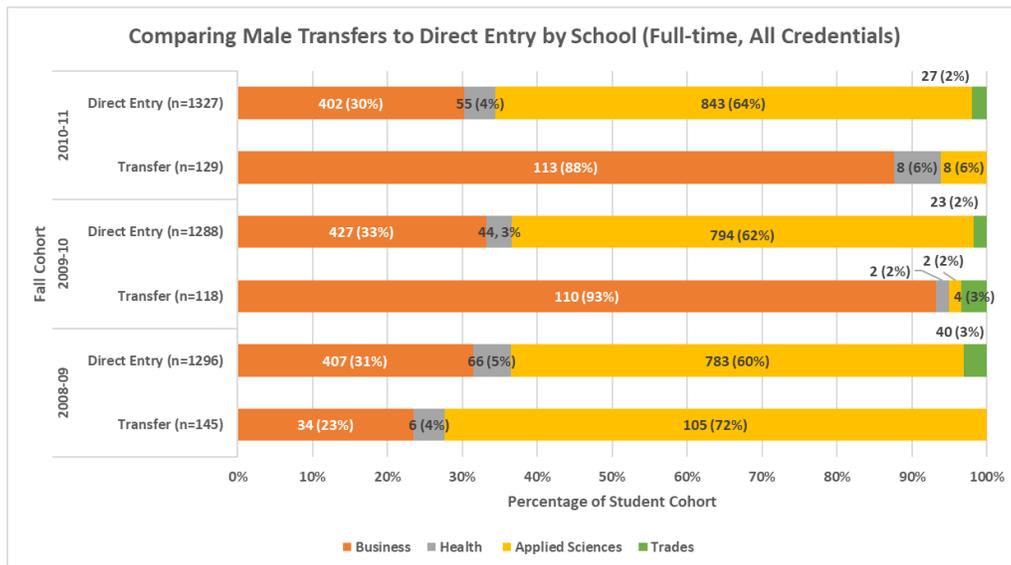


Figure 39: Male Transfer versus Direct Entry Students (Full-time, All Credentials)



⁵⁶ Table 36 provides the full data set for this analysis given the complexity of the data.

Table 34: Transfer Gender Breakdown - Business and Health Sciences (Full-time, By Credential)

Gender by School	Fall 2008-09				Fall 2009-20				Fall 2010-11			
	APP DEGREE	DEGREE	DIPLOMA	Total	APP DEGREE	DEGREE	DIPLOMA	Total	APP DEGREE	DEGREE	DIPLOMA	Total
Business	x	x	79	x	x	140	83	x	x	165	69	x
F	x	x	47	x	x	67	48	x	x	86	35	x
M	x	x	32	x	x	73	35	x	x	79	33	x
Health Sciences			36	x			24	24			30	30
F			30	30			22	22			22	22
M			x	x			x	x			x	x
Column Totals	x	x	115	120	x	140	107	250	x	165	98	265

'x' – results considered sensitive if row or column totals fell below 10. The row totals were masked if it was possible to derive the results for credentials that were considered sensitive.

Table 35: Direct Entry Gender Breakdown - Business and Health Sciences (Full-time, By Credential)

Gender by School	Fall 2008-09				Fall 2009-20				Fall 2010-11			
	APP DEGREE	DEGREE	DIPLOMA	Total	APP DEGREE	DEGREE	DIPLOMA	Total	APP DEGREE	DEGREE	DIPLOMA	Total
Business	69	31	793	893	61	33	784	878	49	46	754	849
F	37	13	436	486	33	12	406	451	28	21	398	447
M	32	18	357	407	28	21	378	427	21	25	356	402
Health Sciences			261	261			222	222			271	271
F			195	195			178	178			216	216
M			66	66			44	44			55	55
Grand Total	69	31	1054	1154	61	33	1006	1100	49	46	1025	1120

Figure 40: Male versus Female Comparison – Transfer and Direct Entry Business and Health as a Comparison to the Overall Class (Full-time, Diploma)

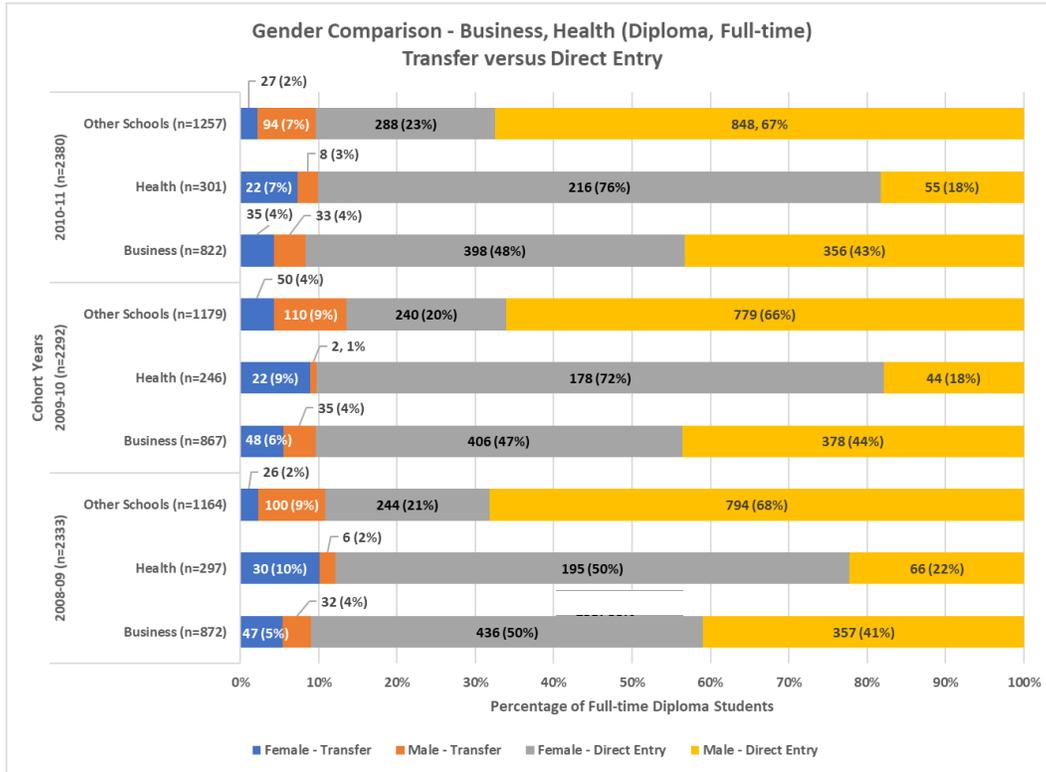


Table 36: Gender Breakdown - Business, Health, Other Schools (Diploma Students, Full-time)

Transfer Students	2008-09 (n=241)			2009-10 (n=267)			2010-11 (n=219)		
	Business	Health	Other Schools	Business	Health	Other Schools	Business	Health	Other Schools
Gender									
F	47	30	26	48	22	50	35	22	27
M	32	6	100	35	2	110	33	8	94
Total – Transfer Students	79	36	76	83	24	160	68	30	121
Direct Entry	2008-09 (n=2092)			2009-10 (n=2025)			2010-11 (n=2161)		
	Business	Health	Other Schools	Business	Health	Other Schools	Business	Health	Other Schools
F	436	195	244	406	178	240	398	216	288
M	357	66	794	378	44	779	356	55	848
Total – Direct Entry Students	793	261	1038	784	222	1019	754	271	1136
Total Students	872	297	1114	867	246	1179	822	301	1257

Gender and Graduation Rate

Female transfer students graduated at a higher proportional rate than female direct entry students when examining data at the school level (Figure 41).

- Business – Female transfer students typically graduated at a higher rate than female direct entry students in each of the Fall cohorts with slight variation in the Fall 2010-11 cohort (69% for transfers versus 68% for direct entry).
- Health – Female transfer students graduated at a higher rate in each Fall cohort apart from the Fall 2009-10 cohort (86% female transfers versus 88% female direct entry students graduated).

In the same vein, male transfer students graduated at a proportionally higher rate than male direct entry students in most of the Fall cohorts for Business and Health (Figure 42).

- Business – The male transfer student graduation rates ranged from 81% to 100% for the different fall cohorts (Fall 2008-09 = 81%; Fall 2009-10 cohort = 85%; Fall 2010-11 = 100%).
- Health – Apart from the Fall 2008-09 cohort when 50% of transfer males graduated versus 85% direct entry males, transfers graduated at a higher rate (Fall 2009-10 = 69% versus 63% for direct entry; Fall 2010-11 = 86% versus 69% for direct entry).

Figure 41: Female Graduation Rates – Diplomas for Business and Health Transfer versus Direct Entry (Full-time)

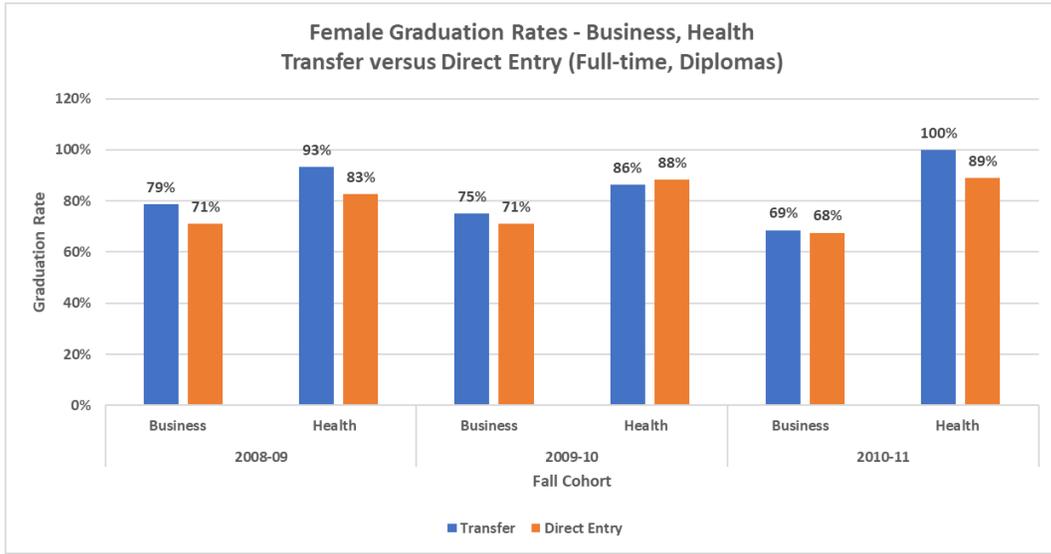


Figure 42: Male Graduation Rates – Diplomas for Business and Health Transfer versus Direct Entry (Full-time)

