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(RE)DEFINING TRANSFER:

Supplemental Report on Data and Methods

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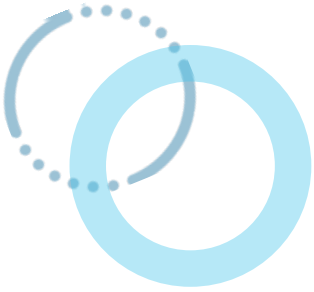

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Introduction

This supplemental report provides an extended discussion of the data and methodology used to identify and craft the terms and definitions of our *(Re)Defining Transfer* report (see Napierala & LaCroix, 2025). As mentioned in the main report, our goal was "to develop a set of clear and concise definitions, based on existing resources and refined through an iterative consultation process" (p. 3). To accomplish this, our project was steered by the following research questions:

1. How are *transfer, mobility,* and *pathway* defined in the scholarly literature and in policy spaces across the sector?
    a. How are these concepts best used with the additional terms *student* and *learner*?
2. What are the best and most accurate definitions of each concept?

To answer these questions, our methodology followed a scoping literature review strategy in which we strategically sampled academic research, policy research, and the institutional policies of Ontario's publicly assisted colleges and universities. Specifically for the second research question, we undertook a process of concept synthesis by distilling the relevant components of existing definitions to generate new definitions that would resonate with the Ontario postsecondary sector.

Below, we outline the literature review process and how we charted and analyzed the key concepts and definitions. To ensure alignment with the *(Re)Defining Transfer* report, we present our analysis of the concepts in the same order. We conclude by discussing two themes that were identified in the analysis of the literature—concept ambiguity and concept interchangeability—and the implications for learner mobility practices in Ontario.

Data and Methods

We employed a scoping review method to identify key concepts in the scholarly literature and institutional policies (Arksey & O'Malley, 2005; Levac et al., 2010). Scoping studies are methodologically rigorous literature reviews that combine broad search questions with "a clearly articulated scope and inquiry" (Levac et al., 2010, p. 3). This approach is useful for a variety of research purposes, especially rapidly mapping "the key concepts underpinning a research area" when the area is complex or has not been previously reviewed (Arksey & O'Malley, 2005, p. 21). In this case, we focused on the broader "field" of learner mobility, encompassing three sources of literature: academic research, policy research, and institutional policies.

By establishing a clear review process, scoping studies are transparent and enable future studies to replicate their methods. Previous studies have successfully used the scoping review strategy to examine trends and conceptual gaps in unexplored postsecondary education topics. For example, in a scoping review of flipped classrooms—a teaching approach in which students are assigned materials and activities to review outside the classroom—O'Flaherty and Phillips (2015) found strong support for flipped classrooms in postsecondary education, although there was a paucity of evidence aligning this pedagogy with enhanced learning outcomes, and there were misunderstandings about the key elements needed to successfully implement this learning strategy.

Scoping reviews have many uses, but they also have limitations. While they are analytic in nature—in that they produce robust findings about the state of the selected research topic—they do not appraise the quality of evidence in existing research (Arksey & O'Malley, 2005). Moreover, they tend to be resource intensive and can be limited in how they weigh the significance of existing evidence when synthesizing data. To address these limitations, our research team utilized various strategies for trustworthiness in qualitative research, such as researcher triangulation and intercoder reliability exercises (Aurini et al., 2022; Denzin, 1978; Napierala & LaCroix, 2025). To bolster our synthesis process, we developed the guiding principles outlined in our main report, which also discusses our stakeholder consultation process, which has been established as a necessary—though underutilized—aspect of scoping studies (Tricco et al., 2016).

Literature Search Strategy

Because our goal was to understand how the concepts of transfer, mobility, and pathway have been used in the scholarly literature and in institutional policy, we designed a broad and inclusive search strategy. We consulted three distinct pools of literature to answer our research questions: academic literature, policy literature, and institutional websites and policies.

As shown in Table 1, we developed inclusion and exclusion criteria for both academic and policy literature to ensure that our search captured the current use of our key concepts and their accompanying definitions. Because institutional policies were retrieved directly from college and university websites, exclusion procedures—such as removing duplicate entries—were not applicable. Inclusion was subject to different parameters discussed later in this section.

TABLE 1
Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Study focus	Studies or reports explicitly focusing on transfer, mobility, pathway, AND higher education.	Studies or reports not focusing on these topic areas.
Time period	Published between 2019 and 2024.	Studies or reports published prior to 2019.
Language	Published in English.	Published in a language other than English.
Type of source	Academic articles were peer reviewed and original research. Policy reports were original research conducted or funded by an organization (see Table 3 for the included organizations).	Academic articles were not peer reviewed or original research. Policy reports were not original research.
Jurisdiction	Academic articles were peer reviewed and original research. Policy reports were original research conducted or funded by an organization (see Table 3 for the included organizations).	Academic articles were not peer reviewed or original research. Policy reports were not original research.

Academic Literature

Learner mobility has long captivated researchers in the United States and is a growing area of interest for Canadian academics (Aurini, LaCroix, Dreesha, et al., 2024; Pizarro Milian & Zarifa, 2021). We analyzed key concepts and definitions by reviewing six academic journals that commonly publish American and Canadian studies on learner mobility. As shown in Table 2, we developed a tailored Boolean search strategy for each main concept.

TABLE 2
Academic Search Strategy

Concept	Search Terms	Initial Results	Publication Filter	Final Results
Transfer	"transfer" AND ("college" OR "university" OR "postsecondary" OR "higher education") AND ("student" OR "learner")	5829	*Canadian Journal of Higher Education; Community College Journal of Research & Practice; Community-College Review; Journal of College Student Retention: Research, Theory, and Practice; Journal of Higher Education; Research in Higher Education*	83
Mobility	"mobility" AND ("college" OR "university" OR "postsecondary" OR "higher education") AND ("student" OR "learner")	3655		0
Language	"pathway" OR "agreement" OR "articulation" AND ("college" OR "university" OR "postsecondary" OR "higher education") AND ("student" OR "learner")	7939		13

Using the EBSCOhost research platform, we inputted our search strategy for each main concept and applied filters supporting our inclusion and exclusion criteria. As shown in Table 2, this filtering process excluded a significant number of entries from the search.

Following our search, the results were exported into Microsoft Excel. After deleting duplicate entries, two researchers independently reviewed the article abstracts in Excel files and evaluated each source based on the established inclusion and exclusion criteria. Following this process, 96 articles were included in the analysis, including 83 articles for the transfer concept, 13 articles for the pathway concept, and zero articles for mobility.

Policy Literature

Learner mobility policies and practices in Canada are shaped by key sector organizations. Often, these organizations conduct independent research on various topics relating to learner mobility or fund research projects conducted by academic researchers. Either way, a considerable amount of policy-oriented research takes place across various jurisdictions in Canada. With this in mind, we compiled a list of relevant Canadian policy organizations (see Table 3). Unlike the academic literature search, which included American research, our policy literature search was confined solely to the Canadian landscape, since these organizations interface more directly with postsecondary institutions.

TABLE 3
Policy Search Strategy

Concept	Policy Organizations	Initial Results	Final Results
Student transfer Credit transfer	Alberta Council on Admissions and Transfer, British Columbia Council on Admission & Transfer, CampusNB, Canadian Information Centre for International Credentials, Government of Canada, Higher Education Quality Council of Ontario, MyNSFuture, Ontario Council on Articulation and Transfer, ONTransfer.ca, Ontario Ministry of Colleges and Universities, Pan-Canadian Council on Articulation and Transfer	64	40
Student mobility		16	5
Pathway Articulation agreement		56	26

Note. Two reports mentioned all three concepts, two reports mentioned both pathway and mobility, four reports mentioned both mobility and transfer, and 23 reports mentioned both pathway and transfer. In total, 71 policy reports were included for analysis, including 40 reports for the transfer concept, five reports for the mobility concept, and 26 reports for the pathway concept.

We searched the publications pages of these organizations, as well as their concept glossary pages if they had them. The glossary pages provided important data for our analysis, which allowed us to identify the following areas of similarity and difference:

- With mobility concepts/definitions used elsewhere by an organization (e.g., other organizational webpages)
- Between policy reports that these organizations funded or conducted themselves
- Between policy organizations

In the policy literature search, we modified our inclusion and exclusion criteria, as outlined in Table 3. The criteria were adapted to fit the unique character of these data—for example, the lack of a peer review process. We also included the terms *credit transfer* and *articulation agreement* to yield additional details about transfer practices in Canada. Two researchers independently reviewed the reports for inclusion in the study and made further exclusions. The same intercoder process was used as with the academic research, with specific exclusions based on the criteria outlined in Table 3. During our review, we found that sources often used multiple concepts throughout their manuscripts. When this occurred, the source was counted toward all the core concepts mentioned.

Institutional Policies

Our third literature source encompassed institutional policies and practices related to our three core concepts. To understand this component of our project, we searched the websites of all publicly assisted colleges and universities in Ontario. Since we could not filter website information the way we could for academic and policy literature, we developed a search procedure (see Table 4).

TABLE 4
Institutional Policy Search Strategy

Search Stage	Procedure
Step 1: Institutional webpage search	Using the search tool on the institution's webpage, we searched for the following concepts and terms: • Transfer • "Learner mobility" AND "student mobility" • Pathway • Articulation agreement • Transfer credit • Advanced standing
Step 2: Academic calendar search	Using the above search terms, we searched within key policy documents.

Institutions provide several noteworthy information sources that communicate their policies on learner mobility, such as transfer admissions websites and student handbooks. Where possible, we reviewed these, though the analytic focus of our search was the formal institutional policies (e.g., academic calendars), because these policies guide mobility practices at the institution. In some cases, we were unable to locate the formal policies of the institutions. In total, our search yielded mobility policies from 20 colleges and 19 universities.

Qualitative Analysis

To begin our analysis, we followed Arksey and O'Malley's (2005) model of charting our data according to the distinct pools of literature we searched. Thus, we identified key metrics for each source type (see Table 5). These metrics for the academic and policy literature broadly overlapped and included some technical attributes, such as the source reference, where the source came from, and the abstract. We also charted the data by identifying the key concepts discussed and the definitions, if provided.

TABLE 5
Analytic Procedure

Literature Source	Metrics
Academic literature	Source reference Abstract Data source Jurisdiction Concept(s) Definition Student/learner
Policy literature	Source reference Organization Concept(s) Definition Student/learner
Academic policy	Transfer "Learner Mobility" AND "Student Mobility" Pathway Articulation agreement Transfer credit Advanced standing

Once the data were charted, we proceeded to a within-group analysis of the literature. Here, the key concepts were analyzed within their respective literature pools (academic literature, policy literature, and academic policies) to observe commonalities and distinctions in the way they were defined and operationalized. For example, we examined how the concept of *transfer* was defined in academic policies between colleges, between universities, and between both institution types. This first stage of analysis therefore allowed us to identify common definitions or definition components of our core concepts as defined in the respective pools of literature, familiarize ourselves with the discussions of these concepts, and identify associated terms and their respective definitions.

The next step in our analysis involved grouping concepts by concept name outside of their literature pools. In doing so, we formed groupings based on each concept to compare and contrast concepts and definitions across the broader subject field of learner mobility. This step was useful for creating

analytic linkages within each core concept and aided our secondary process of synthesis, as discussed in our main report. Below, we present our analysis in the following order: 1) key learner mobility concepts, 2) mobility patterns, and 3) mechanisms of learner mobility, which mirrors the arrangement in our main report (Napierala & LaCroix, 2025).

Key Learner Mobility Concepts

In this section, we present an extended analysis of the core concepts of transfer, mobility, and pathway as well as associated terms. The core mobility concepts were broadly discussed across all three pools of the literature we sampled. Some concepts, such as mobility, had larger gaps in the literature than others. For each concept, we include a discussion of how the concept was defined and note areas of contrast within and between the different pools of literature.

Transfer

The transfer concept was widely used, with some contrasting definitions and implementations between the pools of literature sampled in this study. Academic articles often used *transfer* as an umbrella concept to capture multiple patterns of learner mobility between institutions or as a broader concept to capture "students who left their initial four-year institution and enrolled at a different institution" (Ishitani & Kamer, 2024, p. 905). In some cases, research examined regional dimensions of transfer in Ontario (e.g., Hillier et al., 2023) or focused on specific directions of transfer, such as outward transitions from a postsecondary institution (i.e., "transfer out"; see Grabsch et al., 2024). Johnson et al. (2023) borrowed a transfer definition from Shapiro et al. (2018), who defined transfer as "any change in a student's institution of enrolment irrespective of the timing, direction, or location of the move, and regardless of whether any credits were transferred from one institution to another" (p. 4).

Especially in the American context, we found that *transfer* was used more synonymously with *vertical transfer* and a host of associated terms to describe the movement of students between community colleges into four-year degree-granting universities (see Hartman et al., 2021; LaVigna, 2020; Shaw et al., 2019; Yu et al., 2024). Yet despite the prevalence of this term, in many instances, *transfer* was under-defined in academic research. Some studies foregrounded institutional relationships between colleges and universities, implying a transfer relationship (e.g., DeChano-Cook & Casey, 2021; Liu & Belfield, 2020; McBride et al., 2024; Peña & Rhoads, 2019; Rodriguez & Kerrigan, 2019; Spencer, 2019), or focused on particular points in the transfer process. For example, Jabbar et al. (2021) analyzed transfer intent and the point at which students "think through transfer," while Chan and Wang (2020) explored the alignment between transfer intent and course-completion patterns. In some instances, studies mentioned *community college transfer,* but they implicitly contextualized this term rather than defining or operationalizing it (e.g., Bicak, 2024; Clovis & Chang, 2021; Jabbar et al., 2022).

In a similar fashion, *transfer* was often defined in policy research according to different transfer patterns (this is discussed in greater detail in the following section) or the interaction between specific types of postsecondary institutions (e.g., LaCroix et al., 2024; Sano et al., 2020; Walters et al., 2020, 2021). *Transfer* was broadly operationalized by the "types" of transfer possible within the Ontario postsecondary system: college-to-college, college-to-university, university-to-college, university-to-university, and swirling. In quantitative studies, *transfer* was used as a

reference category to compare transfer and non-transfer student types (e.g., Sano et al., 2020; Walters et al., 2020).

The concept of transfer was applied inconsistently in the institutional policy domain, with colleges tending to not explicitly define it and universities using it as a category to distinguish between types of applicants. We found that many colleges (n = 13) did not have a definition for *transfer* but instead provided scenario-based information, discussed *transfer* using other policy terms, or offered no definition at all. For example, colleges sometimes discussed transfer in relation to advanced standing and the number of transfer credits a student might receive. Thus, colleges tend not to have clear and explicit policy information about who transfer students are or how they define transfer. Universities, on the other hand, used the *transfer* concept to define different types of university applicants (e.g., those coming from college or university). Students with prior college attendance were categorized as college transfer students, while those with prior university attendance were categorized as university transfer students. For each category, universities had specific inclusion criteria relating to the length of time students needed to have attended their previous institutions, their credential progress, and their academic standing.

Transfer Student

In the literature examined here, *transfer student* was treated as a broad reference term for a student who moves between institutions. As Quinn-Nilas et al. (2022) stated, “Transfer students are a group with heterogenous profiles” (p. 3), and these profiles could include any number of transfer patterns between institutions or types of institutions, as well as the amount of advanced standing received due to transfer credits. Other articles were concerned with the *transfer efficacy* of transfer students—that is, the role of self-efficacy in the transfer process (e.g., Buenaflor, 2023)—and the transfer-specific support students look for to help them last at their new institutions (e.g., Daddona et al., 2021). Therefore, transfer students were categorized as those moving between institutions and receiving transfer credits. However, a body of work also investigated the characteristics of these students and their behaviours in the postsecondary system. Distinguishing transfer students by their movement between institutions aligns with the practices we found at colleges and universities. As mentioned above, these institutions tend to define different categories of applicants rather than define the term *transfer.*

Mobility

Mobility was largely under-defined across the pool of literature we sampled. No academic articles explicitly defined student mobility, and policy research on the concept was scant. However, both the Alberta Council on Admissions and Transfer (ACAT) and the Pan-Canadian Council on Admissions and Transfer (PCCAT) provide glossary terms defining this concept in a broad fashion. ACAT defined mobility as “[allowing] students to earn credits toward a credential at more than one institution, ladder from one credential to another credential, build on foundational learning and high school upgrading to enter post-secondary studies, and/or access to many other learner pathways” (ACAT, n.d.). PCCAT defined mobility as “the ability of an individual to move from one institution to another aided by documents such as official academic transcripts, diplomas, and by established inter-institutional partnerships, transfer systems, agreements, and pathways” (PCCAT, n.d.). The British Columbia Council on Admissions & Transfer (BCCAT) addressed various types of student mobility but did not offer a specific definition. More specifically, Ting and Bui (2023) discussed

three main "mobility patterns" (linear, lateral, reverse), noting that students can be "highly mobile" and make "multiple moves through 3+ institutions" (p. 2). They also acknowledged that mobility should not be thought of only as the single moves students make. In policy reports, we found passing references to mobility, but the concept was either not defined or used colloquially to refer to student movement from one postsecondary institution to another (e.g., Brown et al., 2024; Finnie et al., 2020; LaCroix et al., 2024).

In terms of institutional policies, only one college had a definition of student mobility: "The ability of a student to move between one program of study to another at or between post-secondary institutions" (Mohawk College, 2024). Mobility was otherwise featured as an aspirational goal of the Ontario postsecondary sector, such as developing pathways (discussed below) to "maximize student mobility" and "increase student access to post-secondary education" (Humber Polytechnic, 2020). There were no definitions of student mobility provided by any of the universities in Ontario.

Pathway

The pathway concept was featured more prominently in American academic literature than in Canadian research. *Pathway* was generally used to discuss the *path or route* that postsecondary students follow from community colleges to four-year universities. In this way, the pathway concept had a good deal of overlap with the transfer concept—at least within the academic literature. Pathway, or the community college pathway, refers to the general movement of students enrolling at community college before transferring to a four-year institution (Hu & Ortagus, 2019; Marco-Bujosa et al., 2021). Community colleges, therefore, provide "two distinct pathways" for students. First, they allow them to transfer to degree programs at universities. Second, they allow them to pursue vocational, career, and technical-level credentials (Marco-Bujosa et al., 2021). While this term was used in a general sense, especially in contrast to articulation agreements, Holzer and Xu (2021) adopted the broadest definition of *pathway*: "We consider a pathway to include one's choice of field of study and desired credential (e.g., certificate, associate degree, or bachelor's degree), as well as a range of additional choices they make along the way and the outcomes they generate… we believe that pathways reflect both what students intend to study and the credentials they intend to earn, as well as how they pursue these goals over time" (p. 352). In fact, they ended up distilling eight distinct pathways and characteristics in their study.

Much like the transfer concept, policy research using *pathway* tended to rely on structural terminology to describe the various routes students take through the postsecondary system. On the one hand, reports such as Maier and Robson (2019) distinguished between the "linear/traditional pathway," where students enter into and complete a university or college credential directly after high school, and "nonlinear/non-traditional pathways," which include "gap years, temporary program interruptions, transfers between and within post-secondary institutions before programs are completed, changing from full to part-time studies or vice versa, or attending and completing multiple programs at multiple institutions, with varying amounts of time in between" (p. 3). Helmer et al. (2021) restated that a pathway is "a route that a learner takes to achieve academic and career success" and noted that this takes a similar form in Indigenous institutes, including completing a credential, transferring to another postsecondary institution, moving from a college diploma to a university degree, finishing a credential at a partner institution, and moving from a postsecondary credential to a post-graduate program (p. 16). St-Denis and Nono Djomang (2024) disaggregated the pathway concept into seven possible classifications, from a student's first

credential to their highest achieved credential. In a similar fashion, Aurini et al. (2024) differentiated between five pathways. Finally, Hopkins et al. (2019), noted that a pathway includes not only specific aspects of transfer, such as the allocation of transfer credits, but also "the learner's entire postsecondary journey—entering into a program, transitioning between programs, and exiting a program, plus all of the wrap-around support services that would be available throughout the learner's pathway experience" (p. 6).

On the college side, the pathway concept was used by a number of institutions, predominantly referring to the different options students have to pursue credentials. Often, these options introduced several associated terms that referred to the different paths that students could follow, such as an academic pathway or a transfer pathway. Other colleges framed these pathways in terms of transfer direction, where students can transfer *in* from another institution or previous education, transfer *within* to a new program, and transfer *out* to another institution (see Lambton College, n.d.; Sault College, n.d.; Seneca College, n.d.). Thus, pathways on the college side of the sector described the academic/program options students have as they move through the system, as well as the relationships between institutions. Like colleges, universities tended to mix concepts when discussing pathways, including *college transfer pathways, multilateral transfer pathways, and bridging pathways.* Each of these configurations refer to the different paths a university student can take through their postsecondary studies.

Mobility Patterns

For our analysis of key terms for learner mobility patterns, we organized key concepts according to a newly developed *cross-type mobility* term, along with two pre-existing terms: *lateral mobility* and *swirler.* These terms were primarily used in academic literature and policy research sources.

The concept of *transfer* was conventionally used to describe the movement of students between postsecondary institutions. This yielded a number of associated terms, such as *vertical transfer* and *reverse transfer,* which do not resonate with the Ontario postsecondary sector. Accordingly, we leaned on mobility as a more accurate concept to describe the movement of students and the patterns by which they move within the sector.

Cross-Type Mobility

Cross-type mobility is a new term originating from this scoping review. Cross-type mobility replaces two existing terms that have been used to describe the movement of students between community colleges and four-year institutions in the United States and between colleges and universities in Canada: vertical transfer and reverse transfer. These two terms accurately reflect the structural position between community colleges and universities in the United States, where four-year universities hold a position of higher esteem. Thus, students move *up* from community college. However, such a structural arrangement is not present in the Ontario postsecondary system, and we therefore need a term to more accurately capture the dynamics between colleges and universities in our system. Accordingly, we developed the term *cross-type mobility,* whereby students move between different types of institutions (i.e., colleges and universities). This concept is defined more fully in our main report.

The lion's share of transfer research included in this review was on community college transfer, otherwise known as vertical transfer. This research prevalence attributed to the *transfer function* of

community colleges in the American higher education system, which feeds students into four-year degree programs (for a review of this term, see Schudde et al., 2020). Many studies using the term *vertical transfer* discussed the vertical movement of students from a community-college *up* to a university (Bahr et al., 2023; Johnson et al., 2023; Nicholas et al., 2021; Spencer, 2023).

In contrast, a second pattern of movement between community colleges and four-year universities is *reverse transfer.* Reverse transfer works in relation to vertical transfer, whereby students transfer *down* from four-year universities to community-colleges. For example, Bloem (2022) defined *reverse transfer* as students transferring to an institution with a "lower sector classification" (p. 840). Similarly, Crisp et al. (2022) discussed it as "transferring 'in reverse' to a community-college" from a bachelor's-granting institution (p. 482). While Bloem (2022) found that this transfer pattern was much less pronounced than traditional vertical transfer, others found it to be a strategic move for students to accumulate credentials. In a novel use of *reverse transfer,* Cortes-Lopez and Taylor (2020) discussed reverse transfer/credit transfer as the transfer of credits "from a four-year institution back to a two-year institution for the purpose of conferring an associate's degree, often while the student is en-route to a bachelor's degree at the four-year institution" (p. 61). Moreover, Shirley et al. (2023) acknowledged that the conventional view of students travelling in reverse and abandoning their degrees is not always true; in fact, there is evidence that these students often eventually return to university (see also Hossler et al., 2012).

Lateral Mobility

Lateral transfer refers to the movement of students across similar institution types—such as college-to-college or university-to-university—and is a term used primarily in academic and policy literature. In much of the policy literature, these mobility patterns are discussed as movements that occur between two institutions of the same type (e.g., Aurini, LaCroix, & Iafolla, 2024; LaCroix et al., 2024; Walters et al., 2020, 2021). Much like our updated term, *cross-type mobility,* we leaned on the mobility concept to capture the movement of students across institutions of the same type. In doing so, we maintain alignment with the academic literature, which focuses on the type of institutions students move between. Crisp et al. (2022), Spencer (2023), and Wickersham (2020) stated that *lateral transfer* refers to transferring from one bachelor's institution to another (see also Hossler et al., 2012; Shapiro et al., 2018). Moreover, Spencer (2023) classified it as one of the two primary directions of transfer that result in a bachelor's degree (the second being vertical transfer). On the other hand, Bloem (2022) used "parallel transfer" to capture the movement of students "to and from similarly classified institutions" (p. 840). Zilvinskis (2022) used "horizontal transfer" to describe the movement of students from one community college to another. Chen and Liu (2024) distinguished between seemingly different classifications of the same type of institution, with lateral transfers referring to "transferring up" from a non-flagship university to a four-year flagship university in Louisiana. This is interesting and highlights within-group differences in terms of status and stratification within the American higher education sector.

Swirling

Swirling is often considered a conventional pattern of mobility, alongside college-to-university and university-to-university, which hinge on a single move between institutions. However, unlike its counterparts, swirling has received much less scholarly attention and is not found in institutional

policies. This lack of scholarly and policy attention means that existing uses tend to be vague and less scrutinized than other mobility patterns.

What distinguishes swirling from other patterns of mobility is the back-and-forth nature of the movement. American research (e.g., Wickersham, 2020; Zilvinskis, 2022) has tended to capture swirling via back-and-forth enrolment between different types of institutions. Wickersham (2020), for example, defined swirling as "the movement from a two-year college to a four-year institution and then back to a 2-year college" (p. 126). Canadian policy research has taken a similar approach, often leaning on interpretations in which students move between two or more institutions, but it has been less concerned about associating the swirling movement with different types of institutions (Aurini, LaCroix, Dreesha, et al., 2024; Aurini, LaCroix, & Iafolla, 2024; LaCroix et al., 2024; Zarifa et al., 2020). For example, Zarifa et al. (2020) defined swirling as "students who changed their institutions more than once within two years." In this way, Canadian policy research has focused more on the movement of students and the number of institutions than on the types of institutions they move between.

Mechanisms of Learner Mobility

The following terms are associated with our three core concepts of transfer, mobility, and pathway. While the previous section focused on the patterns that characterize students' movement through the postsecondary sector, the mechanisms of transfer are more technical terms that are relevant to institutional transfer practices. These mechanisms were primarily derived from institutional websites and the academic policies of Ontario colleges and universities.

Advanced Standing

Advanced standing is primarily used in administrative contexts, and was therefore discussed in institutional policies, but it was not defined in academic or policy research. Colleges and universities adopt similar interpretations of advanced standing, in which a student is admitted to a program beyond the conventional semester-one entry point. Advanced standing is closely tied to the terms *credit transfer* and *transfer credit,* as both are means through which a student is able to achieve advanced standing. The University of Windsor (2015) mentioned that awarding transfer credits reduces the number of courses a student needs to take for their degree, "thereby giving the student advanced standing in a program" (p. 1). Similarly, Trent University (n.d.) defined advanced standing as "placement to a certain level in a subject area granted to students on admission" or otherwise "entering the University with transfer credits." Thus, through the allocation of transfer credits, transfer students can achieve advanced standing in their new programs.

Transfer Credits

The term *transfer credit* is well defined and easy to locate, both on institutional websites and within college policy documents. A representative definition of transfer credit is "an academic credit earned for courses completed at another post-secondary institution" (Confederation College, n.d.). It is important to note that in the vast majority of cases, information provided by colleges referred to external transfer credits (i.e., awarding credit for courses taken elsewhere), as opposed to *internal* transfer credits for courses taken within the institutions (see Algonquin College, 2021;

Fanshawe College, 2024). Most commonly, references to external credits referred to other *recognized institutions.*

For colleges, transfer credits are assessed by receiving institutions on a course-by-course basis and have varying assessment criteria. For example, at Confederation College (n.d.), students need to have a minimum grade of 60% in the course they are trying to transfer, and the course needs to "match at least 75% of the learning outcomes of a Confederation College course." Lambton College (2021) requires a 70% overlap in the learning outcomes, while Fanshawe (n.d.) requires at least 80% comparable content and learning outcomes. While these are minute details, they nonetheless represent some within-group variation regarding the amount of overlap required to award transfer credits. The principle of awarding transfer credits is to recognize that "while learning experiences may differ in a variety of ways, their substance may be essentially equivalent in terms of their content and rigour. As often as possible, acceptance of transfer credits shall allow for the maximum recognition of previous learning" (Georgian College, 2025, p. 1).

In contrast to colleges, universities distinguish between college- and university-bound transfer credits. There seem to be differences at universities with respect to granting transfer credits for courses completed at college. At the University of Ottawa, college transfer students are only eligible to receive transfer credits if they have completed four terms (two years) of full-time study (University of Ottawa, n.d.). Applicants who have completed only one year are ineligible for transfer credits. In a similar fashion, college transfer students applying to the University of Guelph are eligible for up to 5.0 credits if they have completed a two-year diploma and up to 10.0 credits if they have completed a three-year diploma (University of Guelph, n.d.).[1] In contrast, York University will award transfer credits to applicants who have completed a college program "or at least one semester of full-time study" at a college or Indigenous institute (York University, 2025). In further contrast to other universities, "Block credit will be awarded for completed semesters. Credit is not granted for individual college courses." York University also provides a caveat for articulation agreements with colleges that may enhance transfer credits.

At many universities, transfer credits are assessed as part of the admissions process, meaning that a transfer student knows which credits they have been awarded prior to enrolling (e.g., Wilfrid Laurier University and the University of Guelph). This practice, however, is not universal. Some universities only assess transfer credits after an offer of admission has been made (see Queen's University, n.d.; University of Toronto Scarborough, n.d.). In either case, students are required to declare their previous studies through the Ontario Universities Application Centre for automatic transcript evaluation (see University of Ottawa, n.d.).

Block Transfer Credits

While transfer credits are assessed on an individual basis and result in a single awarded credit, according to George Brown College (2015), block *transfer refers* to "advanced standing for a group of credits or courses at one institution based on their equivalence to a defined set of course or program learning outcomes at another institution. Block transfer enables direct entry to the second, or higher, semester" (p. 2). Block transfer therefore awards a grouping of credits, which

[1] For a similar policy, see Queen's University (n.d.)

enables students to enter programs at a higher semester level. As Humber Polytechnic (2024) mentioned, this evaluation is "typically based on the completion of an approved credential or program, from Humber or another institution," and students are awarded a block of credits on their transcript, as opposed to having individual transfer courses listed. At many colleges, *block transfer* and *advanced standing* are used interchangeably (e.g., Cambrian College, Conestoga College, George Brown College, and Georgian College). At Sheridan College, block transfer is defined as "credits granted based on an agreement or pathway" (Sheridan College, 2019, p. 1), suggesting a formal partnership for particular programs between Sheridan and other colleges or universities that students would be following.

Universities tend to associate block transfer with a particular form of admission pathway. In some cases, such as Nipissing University (n.d.), "Block credits are typically granted when a graduate of a program wishes to transfer credits to another program that is very closely related in content" (Nipissing University, n.d.). Much like Nipissing, the University of Windsor also specifies that block transfer credits are applicable to *graduates* from a college diploma or university degree, "leaving a set number of course requirements needed to complete [a] degree" (University of Windsor, n.d.). Wilfrid Laurier University specifies that block transfer credits are a component of "block transfer agreements," which are designed to "streamline the transfer credit approval process for college graduates looking to earn a university degree" (Wilfrid Laurier University, n.d.). In sum, universities award blocks of credits to recognize previously completed programs, although they associate this form of transfer credit with particular admission pathways, often the college-to-university mobility pattern.

Credit Transfer

While *transfer credit* and *block transfer credits* are the credits that appear on a student's transcript at the receiving institution, *credit transfer* refers to the process of evaluating and awarding credit. At Conestoga College, "credit transfer is the recognition of a credit by Conestoga for courses or programs completed in another program or recognized academic institution at a postsecondary level" (Conestoga College, 2024, p. 2). Canadore College also provides a detailed description of this process, in which "credit transfer is a process which compares the content, course hours and learning outcomes between courses" (Canadore College, 2024, p. 2). Therefore, credit transfer is the process of evaluating a student's previous postsecondary education for equivalencies at their new institution, often based on institutionally specific evaluation criteria.

Articulation Agreement

Articulation agreements are structured transfer pathways. As Worsham et al. (2021) state, "these agreements provide structured pathways for students to transition from two-year institutions to four-year institutions with the intention of creating a streamlined four-year plan to a bachelor's degree without the accumulation of excess credits" (p. 943). There is a general consensus in the academic literature that articulation agreements have expanded over the years to enhance learner mobility (e.g., Grote et al., 2021; Worsham et al., 2021). These agreements are process tools for "aligning coursework between higher education institutions" to maximize credit transfer and make transfer more cost-effective (Payne et al., 2022, p. 575). Thus, articulation agreements tend to work off a *two-plus-two model* of transfer whereby students complete foundational work at a community college and then follow a formal transfer pathway to their degree (see Worsham et al., 2021).

Although there is an overlap between the concepts of *pathways* and *articulation agreements,* the distinguishing factor is the formal nature of the latter. These agreements are not merely "handshake" deals between institutions but are "contracts between sending and receiving colleges regarding how courses will be counted toward a student's degree after transfer" (Logue et al., 2023, p. 267).

Articulation agreements require a process of articulation followed by a program partnership outcome. As noted by BCCAT (n.d.), "Articulation is the process of one institution assessing another institution's courses or programs to determine if they are similar enough to award transfer credit. If transfer credit is awarded, the agreement to grant transfer credit is called the 'articulation agreement.'" Once the articulation process has taken place, institutions enter into a formal 'articulation agreement' with one another. These agreements can be bilateral (i.e., only between two institutions) or multilateral (i.e., between more than two institutions)." As defined by Mohawk College (2024), an articulation agreement is "an official agreement between two (bilateral) or more (multilateral) post-secondary institutions that defines the terms and conditions enabling students to transfer between specific programs."

Many articulation agreements also "determine which courses or programs taken at the sending institution will apply to the graduation requirements at the receiving institution." This wording has been adopted by several colleges (Durham College, Fleming College, George Brown College, Georgian College, Loyalist College, and Mohawk College). Universities tend not to define articulation agreements in their institutional policies as clearly as colleges do. However, when institutions discuss articulation agreements, it is clear that the focus is on college and university partnerships. Generally, the definitions provided establish that articulation agreements are official agreements between two or more postsecondary institutions that enable students to enter programs with advanced standing.

Findings

Our scoping review captured existing mobility concepts and their definitions across the academic and policy literature and included institutional policies. As a result, our analysis captures the way concepts are used in the scholarly literature and potentially contrasts with policies and practices at colleges and universities. We discuss these findings in greater detail below.

Concept Ambiguity

Although our analysis could distinguish between the core concepts of transfer, mobility, and pathway, as well as capture a number of associated terms, we found a fair amount of ambiguity surrounding seemingly distinct terminology. For example, we found that the *transfer* concept had mixed interpretations in the academic and policy literature as well as seemingly distinct policy applications at Ontario colleges and universities. *Mobility* tended to be undefined across all pools of the literature and was often used in a colloquial sense to describe the movement of students in the postsecondary sector. Finally, *pathway* was used to describe particular *routes* that students could take through their studies.

One interpretation of this ambiguity is that researchers and practitioners in Canada improperly import American concepts into Canadian research. Although student mobility is a growing subject in Canadian education studies (Aurini, LaCroix, Dreesha, et al., 2024; Pizarro Milian & Zarifa, 2021), American researchers have a significant head start on creating, defining, and applying mobility concepts. This wider pool of American research has therefore provided a fertile crop of terms that can be *transferred* over and applied to Canadian research. While these terms may serve a role in Canadian research, many do not resonate with the way Canadian postsecondary education—and therefore student mobility—is organized. Terms such as *vertical transfer* and *reverse transfer* reflect a distinct postsecondary system structure that is not widely present in Canadian provinces.[2] While our system does have both colleges and universities—and a considerable amount of student movement between them—we do not have a hierarchical system that positions universities *above or in front* of colleges. Thus, while these terms may be convenient for researchers to use, we caution against their application in Canadian mobility research.

A second interpretation of concept ambiguity is that researchers and policy experts may rely on implicit assumptions about mobility terms and definitions and therefore do not provide explicit definitions of their own. Some studies foregrounded institutional relationships between colleges and universities, implying a transfer relationship (e.g., DeChano-Cook & Casey, 2021; Liu & Belfield, 2020; McBride et al., 2024; Peña & Rhoads, 2019; Rodriguez & Kerrigan, 2019; Spencer, 2019), or focused on particular points in the transfer process (e.g., Chan & Wang, 2020; Jabbar et al., 2019). While these articles concentrated on core elements of transfer practices (e.g., student success; see Chan & Wang, 2020; Morales-Gracia et al., 2022), easing transfer transitions (e.g., Dockendorff & Castro, 2019; Fematt et al., 2021), and tangential aspects of transfer access (e.g.,

[2] For a review on the establishment of mobility systems in Canadian postsecondary education, see Skolnik (2010).

representation of underrepresented groups; see Del Real Viramontes, 2021; Denner et al., 2023; Mobley & Brawner, 2019; Peña & Rhoads, 2019; Qaqish et al., 2020), they did less conceptual weightlifting to foreground or explain the foundations of the terms they were working with.

Concept Interchangeability

Given that scholarly and policy research is often used to inform institutional practices, the ambiguous use of mobility terminology may be making its way into institutional policies. When concepts are used in an ambiguous fashion, an associated issue arises in which seeminglydistinct concepts begin to be used interchangeably. In some instances, colleges and universities contribute to this problem by using concepts interchangeably in their transfer policies. In an extreme case, we found instances of the terms *transfer credit* and *advanced standing* being understood to have synonymous meanings with one another, and policies used the terms interchangeably. However, based on our scoping review, we found that these terms captured distinct aspects of mobility, in which transfer credits were objective outcomes resulting from a process of credit equivalency evaluations, and advanced standing involved admitting students to programs beyond the conventional first-semester entry point.

We also found that the pathway concept was underdefined in scholarly and policy research and was often interchanged with other concepts to capture specific mobility options. As identified in our review, the pathway concept was frequently combined with other concepts and terms—such as *program, transfer,* or *bridging*—to capture the different paths students can take through university and college education. While this interchangeability may be attributed to ambiguously defined terminology, it can have real consequences when students move from one institution to another, especially if their new institution defines key concepts differently. In this way, concept interchangeability can create a fractured policy terrain between postsecondary institutions.

Conclusion

Terminology plays an important role in shaping research agendas, policy discourse, and institutional policies. In this project, we set out to understand the conceptual landscape of the mobility field to develop a clear framework for use across stakeholder groups. Through the analysis described in this supplemental report, we found discrepancies in the usage of key terms in the mobility literature, which has resulted in ambiguity and concept interchangeability. Although concepts *tend* to have comprehensive definitions throughout the broader mobility field, they are not always defined within single literature sources, and this can lead to an uneven policy landscape. Moving forward, we suggest that stakeholders work toward harmonizing the terminology they use with the framework developed from this project. The full set of definitions and rationales, along with additional recommendations for the sector, can be found in our report *(Re) Defining Transfer* (Napierala & LaCroix, 2025).

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