



Transfer Student Performance

Approaches to Measuring Transfer Student Performance

Prepared by Anna Tikina, Research Officer, BCCAT

Transfer student performance in British Columbia (BC) has been studied since the introduction of university-college articulation in the 1960s. The assessment of transfer students' performance stems from the desire to measure how well transfer pathways prepare students for success in the receiving program, as well as to inform post-secondary institutions about the efficacy of the pathway. Transfer student performance can be measured in three ways:

a) System-wide measures. These refer to performance measures on system-wide goals. Access to university education and baccalaureate programs has been a primary goal for transfer from the system-wide perspective. The capacity to produce sufficient number of graduates to meet the projected labour market demand is another goal. While the original goal was to produce a sufficient number of baccalaureate graduates, transfer courses are currently recognized in several types of credentials. Thus, meeting the labour market demand for “stackable” certificates and diplomas could be another performance measure on the system level. Labour outcomes of transfer graduates fall into this category.

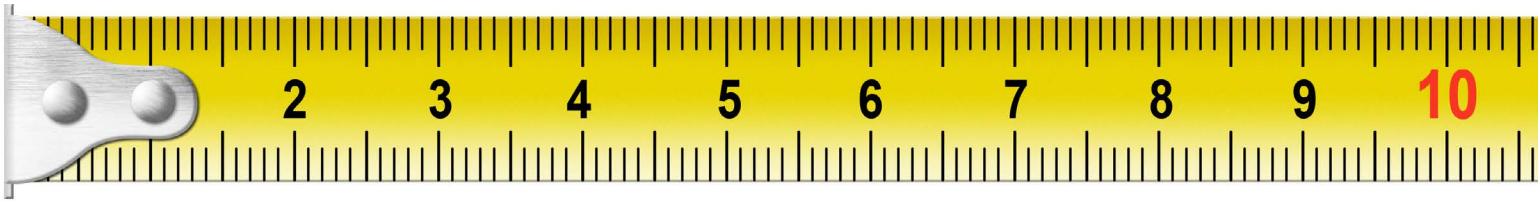
b) Institutional measures. These pertain to the resources the institution needs to invest in transfer pathways, and their goals for provision of transfer pathways. Typically, these measures are related to transfer students' academic performance, for example, the length of time a student takes to complete a degree, student retention and progression, or the amount of support services a student requires.

c) Student-specific non-academic measures. The goals associated with such measures could range from saving money through paying less for college courses while having the goal to transfer later, to demand for further education for career

The assessment of transfer students' performance stems from the desire to measure how well transfer pathways prepare students for success in the receiving program, and to inform post-secondary institutions about the efficacy of the pathway.

enhancement, to avoiding labour market in times of economic downturn. As Dennison (1978) stated, “on several accounts, i.e. community demand, quality of intellectual life, encounter with academic realities, university-transfer programs are defensible.” Post-secondary institutions often survey the reasons/goals for transfer with their incoming transfer students, but the performance on measures associated with these goals has rarely been investigated. “Survey of Movers” (BCCAT, 2013) is the most recent BC study investigating transfer student motivations and performance province-wide.

Focusing on the system-wide and institutional levels of analysis, BCCAT has produced a series of reports assessing the academic performance of “traditional” transfer students—those making what is often now termed “vertical” transfer from two-year programs to degree programs at another institution. As the understanding of transfer patterns developed over this time, a number of methodologies have been employed. The purpose of this analysis is to summarize methods used for assessing the academic success of transfer students and to identify the strengths and limitations of various methodologies in BC and elsewhere.



The review of publications was undertaken using both scientific databases (Google Scholar, JSTOR) and professional publications in Canada and the USA. The literature search identified over 40 relatively recent publications pertaining to the performance of transfer students. National, regional (e.g., in a state or province), and institutional studies were included into the review. While some analyses were done on the national or provincial scale, the majority of these studies adhere to the institutional perspective on measuring performance. Access measures have been analyzed to a much smaller extent, but this research (e.g., Dennison 1978 or Heslop 2004) confirmed that transfer pathways provided access to students who otherwise would have been ineligible to apply to university directly. Labour outcomes as a measure of performance for transfer students were included in two studies (Mickelson and Laugerman, 2011; Durham College, 2012). Specifically, Mickelson and Laugerman (2011) found lower employment rates and higher percentages of job-seekers and in-state employment for transfer students compared to direct entry students, while salary was comparable for both groups.

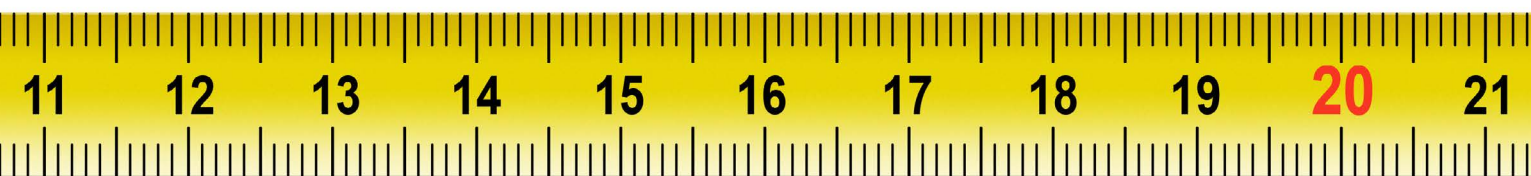
A catalogue of methodologies collected through this review identified several measures of academic success, data sources, and scope of the studies. The analysis showed that the population of transfer students has been defined in different ways (Table 1), and a range of measures has been used to assess their success.

No two studies applied similar transfer student definitions. This wide difference in definitions of transfer students necessitates caution when interpreting their performance outcomes, and precludes easy comparisons between the studies.

The most commonly used measures of success were GPA, graduation rate and persistence/ attrition (Table 2). However, these criteria were defined differently in different studies; e.g., first-term GPA vs. overall GPA, or graduation rate within six or eight years. The methodologies employed were very different, and this can explain the variability of the results in transfer students' success. For example, a number of US and Canadian studies found that the transfer students' GPA was lower than the performance of direct entry students (Alfonso, 2006; Brown, 2012; Mickelson and Laugerman, 2011). However, there were also studies that uncovered contradictory results where transfer students' GPA was higher than the GPA of direct entry students, or the GPAs were comparable (Table 2).

A few studies found that after the initial "transfer shock", the transfer students' GPA recovered and were similar to the direct entry students' performance. The majority of the research that measured attrition/ retention indicated that transfer students had lower persistence than direct entry students, based on a number of reasons and demographic characteristics, such as maturity, family or job obligations, or socio-economic status.

Transfer students' graduation rate was typically found to be lower than the graduation rate of direct entry students. However, several studies found similar graduation rates. For example, Monaghan & Attewell (2014), noted a lower six-year graduation rate for transfer students, and discussed the potential for higher graduation rate if the study were extended beyond six years. Given that transfer students have not been included in the US Integrated Postsecondary Education Data System (IPEDS) cohort



for calculating graduation rate, Soldner et al. (2016) advocated for expanding the cohort to include transfer students, and taking a more holistic view of a transfer student’s journey through several institutions.

In summary, the three most common institutional measures of transfer students’ academic performance have been the GPA, graduation rate, and student persistence. Utilizing some identified measures of transfer students’ performance would be beneficial for all BC post-secondary institutions. This could be applied

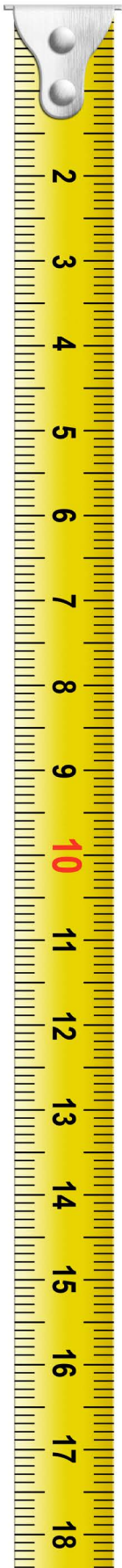
to all institutions, even those that have traditionally assumed the sender role, as BC research has identified multi-dimensional direction of transfer. In order to investigate performance on both academic and non-academic outcomes, understanding the role of transfer for providing access to post-secondary education could be a topic of a province-wide study. Possible future studies could also include an analysis of student motivations for transfer and students’ transfer outcomes beyond satisfaction with the transfer process.

TABLE 1: Examples of definitions for transfer students in reviewed publications

Monaghan & Attewell (2014)	From the US survey Beginning Postsecondary Students (BPS) 2004/2009: “Financially dependent students attending either community colleges or non- or minimally-selective 4-year institutions, who enrolled full-time in their first semester, were enrolled either in a bachelor’s or associate degree program, and who said they aspired to a bachelor’s degree or higher.”
Stewart & Martinello (2012)	Transfer students were a subset of Brock University “...students who remained enrolled in at least one of 11 [social sciences] courses after the initial two-week add/drop registration period” during the 2008–2009 academic year. This includes students transferring both from college and transfer from another university.
Gerhardt et al. (2012)	“Transfer credit students are those who transferred from a college to WLU...” “(a sample of up to 50 students from each campus for each cohort from 2008 to 2011)”
Garcia Falconetti (2009)	All entering community college transfer students who held the Associate in Arts (A. A.) degree at matriculation...” “between the years of 2001 and 2006 from FAU, UNF, and UWF.”
Melguizo et al. (2011)	From the National Education Longitudinal Study (NELS :88), a longitudinal, nationally-representative sample of eighth graders in 1988, transfer students are those who “graduated from high school on time, enrolled in college, and attained junior status at a four-year college either by... transferring from a community college. The substantial majority of the students entered a postsecondary institution by 1994, two years after they graduated from high school, and those who started postsecondary education right after high school graduation have up to 8.5 years to attain a bachelor’s degree.”

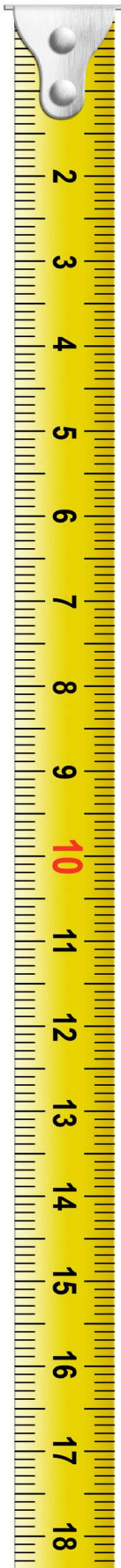
TABLE 2: Performance measures of transfer students and their outcomes

Performance Measure	Performance of Transfer Students			Measure Used but Not Compared with Direct Entry Students
	Higher than Direct Entry Students	Similar to Direct Entry Students	Lower than Direct Entry Students	
GPA	Confederation College (2012) (higher in college); Glass & Harrington (2002); Gerhardt et al. (2012); Gorman et al. (2012) Mondal & Galbraith (2014)	Acai and Newton (2015); Tikina (2015); Brown & McAlear (2014); Drewes et al. (2012); Garcia Falconetti (2009); Johnson (2005); Palmer (2011); Stewart & Martinello (2012); Weiss (2011)	Abadin (2011); Brown (2012); Carlan & Bigsby (2000) (shock, later similar); Diaz (1992) (67% recovered from transfer shock); Durham College (2012); Fisher et al. (2012) (lower first year after transfer, similar in Year 2); Martinello & Stewart (2015); Mickelson and Laugerman (2011); Monaghan & Attewell (2014); Reed-Nolan (2009)	Coffey et al. (2012); Graham & Hughes (1994); Ishitani & McKittrick (2010); ONCAT (2013); Kennet & Maki (2014); Marsil et al. (2015); McGuire & Belcheir (2013) Shapiro et al. (2013); Wang (2008)
Graduation Rate	Martinello & Stewart (2015) (3 year graduation rate)	Abadin (2011); Brown & McAlear (2014); Coffey et al. (2012); Melguizo et al (2011) (8 years since high school); Tikina (2015)	Alfonso (2006); Brown (2012); Dickerson (2008); Durham College (2012); Long & Kurlaender (2009); Melguizo & Dowd (2009); Monaghan & Attewell (2014); Mondal & Galbraith (2014); Mullen & Eimers (2001)	Confederation College (2012); McGuire & Belcheir (2013)
Persistence	Gorman et al. (2012)		Abadin (2011); Brown (2012); Drewes et al. (2012) Garcia Falconetti (2009)	McGuire & Belcheir (2013); ONCAT (2013); Wang (2008)
Total number of earned credits	Monaghan & Attewell (2014)	Melguizo et al. (2011) (non-remedial courses); Martinello & Stewart (2015)	Garcia Falconetti (2009)	
Number of course attempts		Stewart & Martinello (2012)	Martinello & Stewart (2015)	
Failed course attempts	Martinello & Stewart (2015); Drewes et al. (2012)			
Number of courses withdrawn	Monaghan & Attewell (2014)	Stewart & Martinello (2012)		
Number of earned credits (a proxy for full-time or part-time)			Martinello & Stewart (2015); Palmer (2011); Tikina (2015)	
Number of remedial courses	Monaghan & Attewell (2014)			
Occurrence of academic suspension		Stewart & Martinello (2015)		

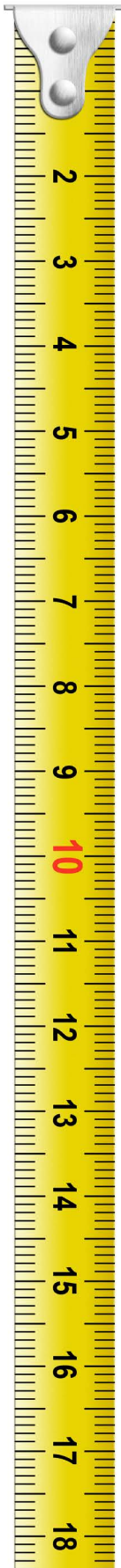


Bibliography

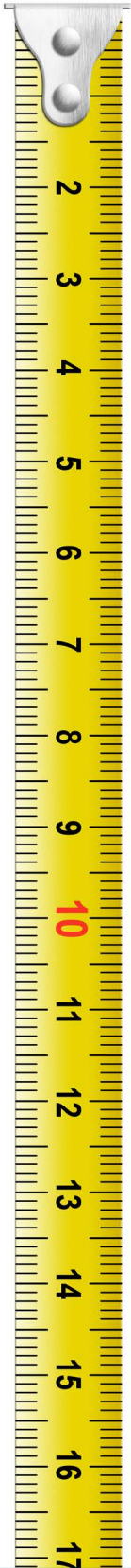
- Abadin, H. S. (2011). *Assessing transfer student performance* (Master's Thesis). Retrieved from <http://cornerstone.lib.mnsu.edu/cgi/viewcontent.cgi?article=1143&context=etds>
- Acai, A., & Newton, G. (2015). A comparison of factors related to university students' learning: College-transfer and direct-entry from high school students. *Canadian Journal of Higher Education*, 45(2), 168–192.
- Alfonso, M. (2006). The impact of community college attendance on baccalaureate attainment. *Research in Higher Education*, 47(8), 873–903.
- BC Council on Admissions and Transfer (BCCAT). (2013). *A survey of movers – Students who move between BC public post-secondary institutions: A summary of findings*. Retrieved from <http://www.bccat.ca/pubs/surveyofmovers2013.pdf>
- Browne, S. (2012). *Student success after transfer from college to Lakehead University*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-11-FINAL-REPORT-Lakehead-Student-success-after-transfer-college-Lakehead.pdf
- Brown, N., & McAlear, L. (2014). *An examination of the academic and professional success of Nipissing University's Bachelor of Commerce College Partnership Program (BComm - CPP)*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2013-03-Nipissing-Examination-Academic-Professional-Success-Nipissing-University-Bachelor-Commerce-College-Partnership-Program.pdf
- Carlan, P. E., & Byxbe, F. R. (2000). Community colleges under the microscope: An analysis of performance predictors for native and transfer students. *Community College Review*, 28(2), 27–42.
- Cejda, B. D., Rewey, K. L., & Kaylor, A. J. (1998). The effect of academic factors on transfer student persistence and graduation: A community college to liberal arts college case study. *Community College Journal of Research and Practice*, 22(7), 675–686.
- Coffey, S., Lindsay, G., & Sproul, S. (2012). *Three-partner collaborative evaluation of student transition, performance, experience, and outcomes in Practice Nursing (PN) - Nursing Degree (BScN) bridging education*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-19-EXEC-SUM-UOIT-Nursing.pdf
- Confederaton College. (2012). *Measures of student success and student experience following college-university transfer in northwestern Ontario*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-5-Confederation-Measures-student-success-experience-following-university-college-transfers-northwestern-Ontario.pdf
- Dennison, J. D. (1978). University transfer programs in the community college. *Canadian Journal of Higher Education*, 8(2), 27–38.
- Diaz, P. E. (1992). Effects of transfer on academic performance of community college students at the four-year institution. *Community Junior College Research Quarterly of Research and Practice*, 16(3), 279–291.



- Dickerson, J. R. (2008). *The factors that influence the graduation rates of community college transfer students and native students at a four-year public state university* (Doctoral dissertation.). Retrieved from ProQuest Digital Dissertations. (AAT 3331220)
- Drewes, T., Maki, K., Lew, K., Willson, M., & Stringham. (2012). *An analysis of CAAT transfer students' academic performance at Trent University*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/oncat_research_reports_36.pdf
- Duggan, M. H., & Pickering, J. W. (2008). Barriers to transfer student academic success and retention. *Journal of College Student Retention: Research, Theory & Practice*, 9(4), 437–459.
- Durham College. (2012). *Understanding student experiences and graduate outcomes for Durham College graduate certificate programs*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-8-Durham-Understanding-student-experiences-graduate-outcomes-Durham-College-graduate-certificate-programs.pdf
- Fisher, D., Nay, E., Wilson, M., & Wood, L. (2012). *Pathways and barriers to art and design undergraduate education for students with previous college and university experience*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-13-OCADU-Pathways-barriers-art-design-undergrad-education-students-previous-college-university.pdf
- Garcia Falconetti, A. M. (2009). 2+2 statewide articulation policy, student persistence, and success in Florida universities. *Community College Journal of Research and Practice*, 33(3–4), 238–255.
- Gerhardt, K., Arai, B., Carroll, M., & Ackerman, M. (2012). *Postsecondary student mobility from college to university: Experience and policy*, Wilfrid Laurier University. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-12-Laurier-Postsecondary-student-mobility-college-university-experience-policy.pdf
- Glass, J. C., & Harrington, A. R. (2002). Academic performance of community college transfer students and “native” students at a large state university. *Community College Journal of Research and Practice*, 26(5), 415–430.
- Gorman, G., Phelps, C., & Carley, R. (2012). *Exploring the success and challenges of diploma to degree transfer students*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2012-4-Conestoga-Exploring-successes-challenges-diploma-degree-transfer.pdf
- Graham, S. W., & Hughes, J. C. (1994). Moving down the road: community college students' academic performance at the university. *Community College Journal of Research and Practice*, 18(5), 449–464.
- Heslop, J. (2004). *Alternate paths to SFU: A comparative academic performance study of B.C. college transfer students and B.C. direct entry students admitted to SFU from 1992 to 1999*. Retrieved from <http://www.bccat.ca/pubs/altpathSFUoct04.pdf>
- Ishitani, T. T., & McKittrick, S. A. (2010). After transfer: The engagement of community college students at a four-year collegiate institution. *Community College Journal of Research and Practice*, 34(7), 576–594.



- Johnson, M. D. (2005). Academic performance of transfer versus “native” students in Natural Resources & Sciences. *College Student Journal*, 39(3), 570.
- Kennett, D., & Maki, K. (2013). *Academic resourcefulness and transfer student success: Direct entry, college transfer, and university transfer student comparisons*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2013-06-Trent-Academic-Resourcefulness-and-Transfer-Student-Success.pdf
- Long, B. T., & Kurlaender, M. (2009). Do community colleges provide a viable pathway to a baccalaureate degree? *Educational Evaluation and Policy Analysis*, 31(1), 30–53.
- Martinello, F., & Stewart, J. (2015). Transfers from college to one Ontario university: A four-year outcome study. *Canadian Journal of Higher Education*, 45(1), 18–36.
- McGuire, S. P., & Belcheir, M. (2013). Transfer student characteristics matter. *Journal of College Student Retention: Research, Theory & Practice*, 15(1), 37–48.
- Melguizo, T., & Dowd, A. (2009). Baccalaureate success of transfers and rising four-year college juniors. *Teachers College Record*, 55.
- Melguizo, T., Kienzl, G. S., & Alfonso, M. (2011). Comparing the educational attainment of community college transfer students and four-year college rising juniors using propensity score matching methods. *Journal of Higher Education*, 82(3), 265–291.
- Mickelson, S., & Laugerman, M. (2011). Characteristics of community college transfer students that successfully matriculate and graduate in Engineering. In *Agricultural and Biosystems Engineering Conference Proceedings and Presentations*. Vancouver, BC. Retrieved from http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1019&context=abe_eng_conf
- Monaghan, D. B., & Attewell, P. (2014). The community college route to the bachelor’s degree. *Educational Evaluation and Policy Analysis*, 1–22.
- Mondal, S., & Galbraith, D. (2014). Comparing the academic success of community college transfer students versus traditional four year students. *International Journal of Academic Research in Economics and Management Sciences*, 3(6), 17.
- Mullen, R., & Eimers, M. (2001). *Understanding transfer success revisited: Transfer students – Who are they and how successful are they?* Retrieved from https://uminfopoint.umssystem.edu/media/fa/planning/professional/Understanding_Transfer_Students_Success_Revisited_paper.pdf
- Palmer, V. J. (2011). *A comparative study of the academic performance of community college transfer students and native students at selected state universities in North Carolina* (Doctoral dissertation). Retrieved from http://thescholarship.ecu.edu/bitstream/handle/10342/3634/Palmer_ecu_0600D_10508.pdf
- Reed-Nolan, K. (2009). *A study of the perceptions and performance of native and community college transfer students at a rural land-grant institution* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT 3386345)



- Shapiro, D., Dandar, A., Ziskin, M., Chiang, Y.-C., Chen, J., Harrell, A., & Torres, V. (2013). *Baccalaureate attainment: A national view of the postsecondary outcomes of students who transfer from two-year to four-year institutions*. Retrieved from <http://nscresearchcenter.org/wp-content/uploads/SignatureReport5.pdf>
- Soldner, M., Smither, C., Parsons, K., & Peek, A. (2016). *Toward improved measurement of student persistence and completion*. Retrieved from <http://www.air.org/sites/default/files/downloads/report/Toward-Improved-Measurement-Persistence-and-Completion-May-2016.pdf>
- Statistics Canada. (2008). *Postsecondary Student Information System (PSIS) files and data element descriptions, and record layout – Canada standard, Version 2.7*. Retrieved from http://www23.statcan.gc.ca/imdb-bmdi/document/5017_D2_T3_V6-eng.pdf
- Stewart, J., & Martinello, F. (2012). Are transfer students different? An examination of first-year grades and course withdrawals. *Canadian Journal of Higher Education*, 42(1), 25–42.
- Tikina, A. (2015). *BC transfer students: Profile and performance report (2008/09 - 2012/13)*. Retrieved from http://www.bccat.ca/pubs/ProfileReport_May2015.pdf
- Wang, X. (2012). Academic performance of community college transfers: Psychological, sociodemographic, and educational correlates. *Community College Journal of Research and Practice*, 36(11), 872–883.
- Weiss, D. (2011). *A comparison of student success between Johnson County Community College transfer students and native students at the University of Kansas* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (AAT 3494285)