

# Identifying Effective Community College and Public University Transfer Partnerships in North Carolina

Carrie E.S. Bartek, Ed.D., North Carolina State University  
Executive Director, College Initiatives and Assessment, Wake Technical Community College

## BRIEF DESCRIPTION

The purpose of this study was to identify community college and university transfer partnerships in North Carolina with higher-than-expected bachelor's degree attainment rates given their student, institutional, and environmental characteristics. Key findings:

- » **A very small proportion of students** who start at a North Carolina Community College System (NCCCS) college actually transferred-out to public colleges in the University of North Carolina (UNC) system in fall 2011.
- » **Bachelor's degree attainment for these students varied** depending on the community college and universities they attended.
- » **Of 928 possible partnership pairs between NCCCS and UNC system colleges**, 110 pairs transferred 10 or more students in fall 2011.
- » **Of the 110 pairs transferring 10 or more students**, about 1/3 had higher-than-expected bachelor's degree attainment rates based on the difference between their predicted and actual bachelor's attainment rates of their transfer students.
- » **NCCCS and UNC system pairs with higher-than-expected bachelor's degree attainment rates** may have been employing transfer practices that made them more effective than others in helping their community college students transfer.
- » **A follow-up companion study investigates these partnerships** to explain the transfer partnerships and practices that contributed to their effectiveness even before the Comprehensive Articulation Agreement (CAA) was updated in 2014 to facilitate the greater transfer of credits.

## INTRODUCTION

Students who start at community colleges in North Carolina comprise large (40%) and growing proportions of postsecondary enrollments nationally and represent an important source of workers with postsecondary credentials needed to fill labor demand for economic development in North Carolina (Steering Committee of the myFutureNC Commission, 2020). A significant proportion of community college students (42%) come from low-income families (Shapiro et al., 2017) where education could serve as a pathway to economic mobility. Transfer from community college to 4-year universities serves as the bridge to "good jobs" (i.e., jobs with median earnings of \$65,000) as those are often held by workers with a bachelor's degree (Carnevale et al., 2018; Shapiro et al., 2017).

The number and percentage of community college students who transfer-out of North Carolina Community College System (NCCCS) colleges and receive bachelor's degrees within six years is relatively low. In fall

2007, 24% transferred-out to universities (ranking among the bottom 10 states nationally) and only 10% actually transferred-out and received bachelor's degrees within six years of starting (ranked among the bottom 15 states nationally; Jenkins & Fink, 2016). Students who transfer from NCCCS colleges to one of 16 public universities in the University of North Carolina (UNC) System attain bachelor's degrees at higher rates (ranked among the top 10 states nationally) than those who transfer to private universities (Jenkins & Fink, 2016); however, they attain bachelor's degrees at lower rates than their peers who start at UNC System colleges (UNC System Info Center, 2020). Transfer-out and bachelor's degree attainment rates for NCCCS transfer students also vary widely depending on the community college and university transfer destination (Jenkins & Fink, 2016; UNC System Info Center, 2020). Recent national research indicates that key transfer and partnership practices between universities and their transfer partners can raise transfer-out rates and bachelor's degree attainment rates for community college students (Fink & Jenkins, 2017). To shed light on how bachelor's degree attainment of transfer students might be improved in North Carolina, this quantitative study is part of a mixed-methods analysis aimed at identifying NCCCS and UNC pairs with higher-than-average numbers of community college students transferring to UNC partners and higher-than-expected bachelor's degree attainment rates (as compared to other possible NCCCS and UNC system pairs). This data incorporates partnerships between the 2- and 4-year institutions even before the CAA was updated in 2014 to improve transfer effectiveness. This initial quantitative identification provides the basis for selecting NCCCS and UNC system pairs in the second, qualitative part of the study, which examines the transfer and partnership practices occurring among these pairs.

## THE PROJECT

This brief details the first part of a larger mixed-methods study replicating, at the state level, national research identifying community college and university pairs that are effective in helping community college students attain bachelor's degrees (Fink & Jenkins, 2017; Xu et al., 2018). The first part of the study identifies high-performing NCCCS and UNC pairs using a UNC System administrative data set for all NCCCS students from North Carolina who transferred to the UNC System with sophomore or junior status in fall 2011 (N=5,132). The outcome variable was the 4-year degree attainment rate of the population of community college students who transferred between each partnership pair, as tracked from the time they entered the university (fall 2011). The 4-year bachelor's degree attainment rates were predicted for each NCCCS and UNC System pair using blocked multiple regression analysis. Predictors were selected based on their significance in the literature and on a conceptual model of partnership impact developed and adjusted for community college and adult students (Astin & Antonio, 2012; Astin & Denson, 2009; Bergman et al., 2014; Ehrenberg & Smith, 2004; Horn & Lee, 2016; Xu et al., 2018). The resulting regression equation (see Appendix, Table 1), was used to calculate the predicated bachelor's completion rate for each pair, which were subtracted from each actual rate to determine the difference. The differences were ranked, with the largest, positive differences representing higher-than-expected bachelor's degree completion rates, indicating they may be employing practices that make them more effective than others in helping their transfer students attain bachelor's degrees (see Appendix, Table 2). This first phase of research resulted in the following key findings:

- » **Relatively few NCCCS students transferred to UNC system in Fall 2011:** Of the 928 possible NCCCS and UNC System partnerships, 514 (55%) transferred any students, and the majority transferred three or fewer students between them. Of the 514 pairs transferring any students, only 12% (110 pairs) transferred 10 or more sophomores or juniors between them

(see Appendix, Table 3). These numbers indicate an important but untapped opportunity to provide more community college students access to bachelor's degrees and at the same time, boost university enrollments.

- » **A majority of NCCCS transfers do so without earning an AA or AS first:** The majority (66%) of the NCCCS students transferring to the UNC System in fall 2011 did so without first earning an Associate in Arts (AA) or an Associate in Science (AS) degree, the community college transfer degrees governed by the CAA (UNC System Info Center, 2020). Even though descriptive statistics and previous research show bachelor's degree attainment rates are higher for AA/AS degree holders (Monaghan & Attewell, 2015), this study indicates that at the partnership level, the AA/AS degree advantage may be reduced or eliminated after controlling for student population characteristics and environments among partnership pairs. The proportion of students with AA/AS degrees among the partnership was not a significant factor in bachelor's degree attainment among the partnership pairs in this study. This finding is consistent with Jenkins and Fink (2016), who found an unclear relationship between bachelor's degree attainment and associates degrees earned, but inconsistent with Kopko and Crosta (2015), who found significant, positive associations of AA/AS awards on bachelor's degree attainment at the student level. However, Kopko and Crosta (2015) acknowledge that higher proportions of AA/AS holders self-select to universities with higher completion rates. More research is needed to establish the effect of AA/AS degrees on the bachelor's degree attainment among partnership pairs.
- » **Economic and Age status of community college transfer students is important to bachelor's degree attainment:** The proportion of students receiving Pell, a need-based federal grant, was a significant negative factor in the bachelor's attainment of transfer students among the NCCCS and UNC system partners. Further, greater average ages of the transfer student population had a negative effect on bachelor's degree attainment rates. Together, these results suggest that boosting financial support of transfer student populations among partnership pairs with high proportions of low income and adult students may lead to higher bachelor's degree attainment rates, as these populations have different economic and life issues as compared to their counterparts who start at universities (Bergman et al., 2014).
- » **North Carolina had several "strong" transfer partnerships, even before the 2014 revisions of the CAA:** Ranked differences between the actual and predicted bachelor's completion rates for the 110 partnership pairs indicates about 35% of them can be described as "strong." A list of the strongest partnership pairs are provided in Table 2 of the Appendix. These pairs have higher-than-expected bachelor's degree attainment rates given the average characteristics of their student populations and environmental factors, indicating they may be employing practices that are more effective than other pairs in promoting transfer student success. The remaining pairs with "as expected" or "lower than expected" transfer student attainment rates may have been employing practices that were adding little more value to, or possibly impeding, bachelor's completion of their community college transfer student population, with partnerships that can be interpreted as weak (Horn & Lee, 2016; Xu et al., 2018).

» **Partnerships, not individual institutions, may make the difference:**

Partnership rankings also indicate the pairs are not dominated by one university or one community college. This suggests that transfer practices employed in isolation at a university or at a community college may not be as important to transfer effectiveness as are the practices in partnership between specific community colleges and specific universities, and the relationships forged between them.

## **FOR DECISION MAKERS: IMPACT ON PRACTICE & POLICY**

The following provides a brief discussion and synopsis of recommendations for research and practice:

### **1. Improve transfer productivity:**

NCCCS-UNC pairs may want to focus on working with specific transfer partners in their region to determine how they might create and smooth transfer pathways and processes to increase the number of students transferring between them.

### **2. Further evaluate the effect of credit transfer versus AA/AS degree awards on bachelor's completion:**

As a majority of community college students in North Carolina continue to transfer to universities without AA/AS awards, more research is needed to evaluate the effects of having versus not having an AA/AS degree on the bachelor's degree attainments of specific NCCCS and UNC system pairs and specific programs. Based on this information, transfer partners and the state should explore how strengthening transfer partnerships, as well as changing policy, such as defining general fields of study for credit transfer into more than one program or changing requirements of the CAA and Baccalaureate Degree Plans might help the majority of students who are not transferring with these degrees.

### **3. Provide more support to low-income and transitioning adult students:**

As income and age factors are significant predictors of bachelor's degree attainment of community college transfer students among the partnership pairs (see Appendix, Table 1), NCCCS-UNC pairs with significant proportions of low-income and adult students may need to find ways to boost financial support as well as non-academic supports customized to the needs of community college transfer students. According to Swing's (2020) recent work in North Carolina, these non-academic supports include helping transfer students prepare for and acquire the knowledge they need to transfer as well as programs geared toward building university connections that increase their motivation and resilience.

#### 4. Identify and emulate effective transfer practices:

While identifying effective NCCCS and UNC System pairs is one step in understanding how to improve community college transfer in the state of North Carolina, the second, companion study to this research describes how and why these pairs were more effective than others helping their community college transfer student populations attain bachelor's degrees within the context of the state policy of North Carolina. Subtle leadership, shared values, and focused attention on transfer structures, processes and practices, are all ways that the most effective partnership pairs helped their community college transfer populations attain bachelor's degrees (Bartek, 2020).

## CONCLUSION

In conclusion, this research identified community college and public university partnership pairs in the state of North Carolina that had higher-than-expected bachelor's degree attainment rates for their transfer students. Similar to national research, this study affirms bachelor's degree attainment rates of specific NCCCS-UNC pairs are also highly variable, even after controlling for observable factors known to influence these rates. Significant predictors controlling these rates are the proportion of older students and the proportion of low-income students. More research is needed to investigate how credit transfer in the absence of AA/AS awards affects bachelor's degree completion for specific partnership pairs and into specific programs, and to understand how and why the identified pairs were more effective than their peers in helping their community college students attain bachelor's degrees. As part of a larger mixed-methods study, a companion brief summarizes this research.

### ABOUT THIS BRIEF

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Contact: Carrie E. S. Bartek, [cebartek@ncsu.edu](mailto:cebartek@ncsu.edu)

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## APPENDIX

**Table 1**  
*Coefficients for Hierarchical Multiple Regression Results*

	Regression Model		
	b	SE	B
Constant	.011	.270	
<b>Community College Inputs</b>			
% Female	.094	.086	.112
% Non-Asian, Non-White*	-.011	.067	-.018
% Pell	-.339**	.111	-.350
% earned AA/AS degree	.039	.092	.045
Transfer Credits	.004	.002	.163
<b>External Environment</b>			
Distance	-.006	.004	-.150
Public university in county	-.046	.037	-.114
Average Median Income	0.00001173	.000	.216
Unemployment Rate	-.016	.031	-.050
<b>University Environment</b>			
% Admitted to the university	.018	.027	.064
Average GPA	.083	.045	.157
% over 25 < 19%	.073**	.027	.286
% Part-time <20%	.029	.028	.101
% instruction/student support expenses	.023	.035	.071

*Note.* \*\* p <.01, \*p <.05

\*Hispanics of any Race, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, Non-Resident Alien, Race and Ethnicity unknown, and Two or more races



**Table 2**

***Partnership Pairs with BA Completion Rates “Much-Higher-Than-Expected”  
(Based on Residual Z-Scores with Percentile Ranks Between One-Half and One  
Standard Deviation Above the Mean)***

<b>UNC Partner</b>	<b>NCCCS Partner</b>	<b>Number of Transfers in Partnership Pair</b>	<b>Actual BA Attainment Rate for Partnership Pair</b>	<b>Predicted BA Attainment Rate for Partnership Pair</b>	<b>Residual Z-Score</b>
UNC-G	Rockingham	25	0.76	0.49	2.78
WSSU	Davidson	14	0.80	0.61	1.97
UNC-CH	Central Piedmont	19	0.95	0.77	1.79
UNC-G	Caldwell	11	0.73	0.55	1.78
UNC-C	Surry	14	0.79	0.62	1.76
UNC-W	Carteret	23	0.83	0.67	1.65
UNC-CH	Durham Tech	31	0.87	0.72	1.59
UNC-C	Stanly	25	0.76	0.61	1.54
ECU	Fayetteville Tech	11	0.82	0.68	1.39
ASU	Forsyth Tech	23	0.83	0.70	1.33
ECU	Lenoir	31	0.74	0.63	1.22
UNC-G	Wake Tech	47	0.70	0.61	1.02
WCU	A-B Tech	54	0.72	0.63	0.99
WCU	Blue Ridge	14	0.71	0.62	0.99
ASU	Sandhills	11	0.73	0.63	0.98
ECU	Catawba Valley	11	0.73	0.64	0.94
UNC-W	Sandhills	14	0.86	0.77	0.92
UNC-W	Wake Tech	31	0.81	0.72	0.90

Note. UNC partner college definitions. UNC-G = University of North Carolina-Greensboro, WSSU = Winston-Salem State University, UNC-CH = University of North Carolina - Chapel Hill, UNC-C = University of North Carolina – Charlotte, UNC-W = University of North Carolina – Wilmington, ECU = East Carolina University, ASU = Appalachian State University, WCU = Western Carolina University

**Table 3.*****Description of University Partners Transferring In At Least One Sophomore or Junior in Fall 2011 Cohort***

<b>UNC System College</b>	<b>Number of transfers (N=5,132)</b>	<b>Number of NCCCS partners with at least 1 transfer (N=514)</b>	<b>Number of NCCCS partners with at least 10 transfers (N=110)</b>	<b>% with AA/AS</b>	<b>% No Degree, 30+ credit hours</b>	<b>Mean number of credits transferred</b>	<b>4-year attainment (among all transfers in 2011 cohort)</b>
NCA&T	125	26	1	28.8%	60.8%	52	48.8%
ASU	471	46	12	39.3%	56.3%	54	70.5%
UNC-A	154	22	3	55.8%	40.9%	62	59.0%
ECU	623	49	16	40.8%	48.2%	60	64.5%
ECSU	33	10	0	51.5%	36.4%	60	42.4%
FSU	150	26	2	21.3%	52.7%	63	54.0%
NCCU	90	23	2	38.9%	44.4%	53	59.0%
UNC-P	199	29	6	26.1%	41.2%	56	45.7%
NCSU	372	47	8	40.6%	57.3%	62	70.4%
UNC-CH	176	29	5	59.7%	38.6%	57	81.3%
UNC-C	906	53	19	33.4%	56.4%	54	56.6%
UNC-G	699	46	14	34.5%	42.8%	52	60.1%
WCU	319	37	9	27.6%	48.0%	60	63.3%
UNC-W	682	48	9	44.9%	44.6%	57	68.6%
WSSU	133	23	4	21.1%	55.6%	54	49.6%

Note. UNC partner college definitions. NCA&T = North Carolina Agricultural and Technical University, ASU = Appalachian State University, UNC-A = University of North Carolina – Asheville, ECU = East Carolina University, ECSU = Elizabeth City State University, FSU = Fayetteville State University, NCCU = North Carolina Central University, UNC-P = University of North Carolina – Pembroke, NCSU = North Carolina State University, UNC-CH = University of North Carolina - Chapel Hill, UNC-C = University of North Carolina – Charlotte, UNC-G = University of North Carolina-Greensboro, WCU = Western Carolina University, UNC-W = University of North Carolina – Wilmington, WSSU = Winston-Salem State University.