

NC STATE UNIVERSITY

College of Education
Belk Center for Community College
Leadership and Research



EXPANDING THE COMPREHENSIVE ARTICULATION AGREEMENT TO APPLIED ASSOCIATE DEGREE EARNERS: A TRANSFER POLICY BRIEF

Expanding the Comprehensive Articulation Agreement to Applied Associate Degree Earners: A Transfer Policy Brief

Introduction

This fall, a committee of experts convened by the State Higher Education Executive Officers Association (SHEEO) is expected to put forth recommendations for improving the North Carolina community college transfer pipeline. Chief among the issues discussed between SHEEO and the Transfer Advisory Committee (TAC) is the critical need to improve transfer outcomes among students who earn Associate in Applied Science (AAS) degrees. The current statewide articulation framework excludes AAS degree earners.

The Belk Center for Community College Leadership and Research supports the work and recommendations of the TAC and agrees that each and every North Carolina student should have an opportunity to earn a baccalaureate degree, regardless of their community college journey.

This policy brief has two purposes. The first is to build on the work of the TAC committee by emphasizing the importance of including AAS earners in the statewide articulation framework. The second is to support North Carolina policymakers and institutional leaders to take action.

We begin by summarizing what existing research tells us about AAS earners including how many there are, their demographic characteristics, where they tend to come from around the state, and their post-transfer outcomes. We then illustrate that facilitating the transfer of AAS earners into baccalaureate programs would help grow and diversify the pool of North Carolinians with bachelor's degrees in critical occupational areas.

About AAS and CAA in NC

Associate in Applied Science (AAS) degrees are typically associated with career preparation, whereas Associate in Arts (AA) and Associate in Science (AS) programs are more geared toward transfer. The most common AAS degrees in North Carolina are in nursing, business administration, information technology, and criminal justice. The statewide Comprehensive Articulation Agreement provides structure for transfer between the state's 58 community colleges and 16 public universities, and guarantees AA/AS earners admission to a UNC institution and have general education requirements waived. The CAA does not include AAS earners.

What Do We Know About AAS Earners and Their College Outcomes?

Existing research by the Belk Center and its affiliates illustrates a convincing case for amending the statewide articulation framework to include AAS earners.

- **AAS earners are a large and growing portion of baccalaureate degree transfers.**

The number of transfer students having first earned a community college AAS Degree has increased by 71% in the last ten years. Today, AAS earners make up roughly a fifth of all students transferring from the NCCCS to UNC System (Atwell & D'Amico, 2021). In fact, the proportion of North Carolina transfer students who are AAS earners has now surpassed Associate in Science (AS) transfers (DeSantis et al., 2021).

- **AAS earners are more likely to come from disadvantaged backgrounds and to identify as racial/ethnic minorities.**

In North Carolina, AAS transfer students are older, on average, than Associate in Arts (AA)/AS transfer students (Atwell & D'Amico, 2021). Compared to their AA/AS counterparts, a higher share of AAS transfers are women and identify as Black/African American. Higher proportions of transfer students from rural and economically distressed counties in North Carolina are making the transition with an AAS as compared with less economically distressed areas (Atwell & D'Amico, 2021).

- **AAS transfers in North Carolina face unnecessary institutional barriers to bachelor's degree attainment.**

While the 4-year bachelor's degree attainment rate for all transfer students is 70%, the 4-year bachelor's degree attainment rate for AAS transfer students is between 51% and 62% (Atwell & D'Amico, 2021; DeSantis et al, 2021). AAS transfers who do graduate complete more excess credits prior to graduation, on average than AA/AS transfers. Disparities in attainment and degree efficiency suggest AAS students experience unique institutional barriers their AA/AS counterparts do not.

In summary, existing research shows that AAS earners represent a large share of all transfer students in the state. These students come from traditionally underserved and disadvantaged backgrounds and despite being as likely as AA/AS earners to pursue baccalaureate degrees (Berkner et. al, 2000; Chase, 2011; Hill, 2016), AAS students appear systematically disadvantaged in the transfer process. Improving the transfer process and bachelor completion rates of AAS students would move the state toward more equitable access to economic opportunity.



A Workforce Development Case for Supporting AAS Transfer

Economic data compiled by the North Carolina Department of Economic Analysis within the North Carolina Department of Commerce highlight another compelling reason for expanding the state's existing Comprehensive Articulation Agreement (CAA) to include AAS degrees.¹

Specifically, the North Carolina Department of Commerce (NC Commerce) data show there are a number of high-wage, high-growth "star jobs" in the state for which there is an inadequate supply of bachelor's degree holders. Occupations on this list include - among others - registered nurses, computer and information systems managers, and mechanical engineers. It is critical for the state's economy that AAS completions are aligned with these occupational pathways.

Fortunately, many of the most frequently awarded North Carolina Community College System (NCCCS) AAS degrees are already aligned with the "star jobs" flagged by the NC Commerce. The Star Jobs rating tool is based on wages, projected growth rate, and projected job openings, with 5 star jobs showing the highest wages and projected job growth. Table 1 lists the 10 most frequent AAS degrees awarded in the 2018-19 academic year. The table illustrates that, for example, 2,269 NCCCS AAS degrees were awarded in registered nursing and 1,429 AAS degrees were awarded in business administration information.

Table 1: Most Frequently Awarded North Carolina Community College AAS Degrees Aligned with High-Wage, High-Growth Occupations

| AAS Degree Program | NCCCS Degrees Awarded in 2018-19 | Sample NC Commerce Star Job Pathway | 2018-19 NCCCS AAS Transfers to UNC |
|-------------------------------|----------------------------------|--------------------------------------|------------------------------------|
| Registered Nursing | 2,269 | Registered Nurses | 101 |
| Business Administration | 1,429 | Management Analysts | 91 |
| Medical Office Administration | 895 | Medical and Health Services Managers | 0 |
| Early Childhood Education | 847 | No direct pathway | 16 |
| Criminal Justice Technology | 845 | No direct pathway | 0 |
| Information Technology | 828 | Database Administrator | 24 |
| Accounting | 442 | Accountants and Auditors | 23 |
| Human Services Technology | 415 | Human Resources Managers | 0 |
| Medical Assisting | 394 | No direct pathway | 0 |
| Automotive Systems Technology | 331 | No direct pathway | 0 |

[1] See the North Carolina Department of Commerce Star Jobs here: <https://tools.ncccareers.org/starjobs/index.html>

From a workforce development perspective, figures in Table 1 are encouraging. There appears to be a strong alignment between the AAS programs students pursue and the projected workforce needs in the state. For example, students earning AAS degrees in nursing would be ideally positioned to pursue careers as Registered Nurses. Students earning AAS degrees in Business Administration would be positioned to pursue careers as Management Analysts, Cost Estimators, Administrative Service Managers or any of the other high-wage, high-demand occupations associated with the Business Administration educational pathway. Similarly, students earning AAS degrees in Information Technology would be well positioned to pursue occupations in Database Administration, Information Security, and Software Development.

Importantly, however, most "star jobs" flagged by NC Commerce require bachelor's degrees. Therefore, while many – though not all – of the AAS degrees awarded in a given year are aligned with projected workforce needs, students must be able to translate their AAS degrees into baccalaureate degrees. There is a clear need for policy action here; in order to grow and diversify the pool of workers with critical workforce skills and talents we need to facilitate the transfer of AAS earners into aligned baccalaureate programs.

Unfortunately, without access to administrative data that connects student records across NCCCS and UNC systems, it is not entirely evident to what extent AAS earners who intend to transfer successfully do so. Existing research suggests that too few do, however. Our analysis of UNC system administrative data from the 2018-19 academic year appears to support this assumption.

For example, Table 1 shows that while 2,269 students earned an AAS in Registered Nursing in 2018-19, just 101 transfer students in nursing had completed the AAS in nursing upon university enrollment. Though 1,429 students earned an AAS in business at a community college, only 91 NCCCS-to-UNC transfer students majoring in Business Administration earned an AAS the year before they transferred. Again, the program data on AAS degree earners comes from NCCCS data dashboard and the transfer data comes from the UNC System, so our analysis is limited in its ability to confirm programs between the systems at the student level. However, these numbers strongly suggest the potential for more individuals in these fields to build their capacity and earn more by completing a bachelor's degree in the same field.



Recommendations for Policy

The goal of the preceding paragraphs has been to underscore what existing research has already made clear: long-term trends show that AAS earners are a growing student population in North Carolina. On the whole, many of these students come from disadvantaged and historically underserved backgrounds and regions in the state. Studies show that the number of students transferring into the UNC system having first earned an AAS degree at an NCCCS institution has increased dramatically in recent years. However, research also shows that AAS earners are less likely than their AA/AS counterparts to earn bachelor's degrees.

Given this existing research, combined with knowledge around the workforce needs in North Carolina, we recommend four policy actions. The first is to expand the existing CAA to include NCCCS AAS transfers. The second is to streamline the transfer process for AAS earners through the creation of universal curricular frameworks or Baccalaureate Degree Plans (BDP). The third is enhanced data infrastructure and sharing across NCCCS and UNC systems. The fourth is to sustain and support student transfer success with strengthened support for TAC.



Expand the existing Comprehensive Articulation Agreement to include AAS earners.

The findings of this brief showcase the growing number of AAS earners that decide to continue their education toward a baccalaureate degree. Additionally, many AAS earners are in fields that are in high demand in the state, including nursing, business administration, and technology. Students in these fields who are inclined to continue their education would benefit from higher earnings with a bachelor's degree in these same fields. Thus far, bilateral agreements – agreements between a university and one or more community colleges to work in unison to help AAS students earn a baccalaureate degree – has paved the way for some AAS earners (D'Amico, et al., 2021). Therefore we recommend that these individual bilateral agreements extend throughout North Carolina by offering AAS transfer students to have the same unified articulation of general education courses as AA and AS earners. One first step might be to prioritize the AAS programs that align best with high volume baccalaureate degree programs into the CAA.



Streamline the transfer process through the creation of universal template for Baccalaureate Degree Plans (BDPs).

BDPs are guiding documents that sequentially outline the courses needed for transfer students to successfully complete their baccalaureate degree. BDPs are specific to the university and the major, yet because BDPs are housed in different locations across institutional websites, transfer students often struggle to find them. This confusion leads to inefficient course-taking, especially for AAS earners. Creating a universal BDP template is a necessary step toward better transfer outcomes. First, a universal BDP template would be housed in a centralized transfer website hub. Second, a universal BDP template would be in a single online format, rather than a variety of Word, Excel, or PDF documents, as is currently the case. Third, while specific universities would still be able to determine which courses are needed for transfer into their programs, a universal BDP would standardize certain general education courses that would transfer to all universities. This clarity and visual consistency for all BDPs would help students compare transfer institutions and subsequently plan their course schedules.



Enhance data sharing across NCCCS and UNC systems.

Currently, both NCCCS and the UNC system publish and maintain data dashboards with helpful information about their systems' student enrollment and completion outcomes. The UNC system's public data dashboard has been useful for understanding transfer student information including which college they attended and what kind of associate degree they completed before enrolling at the university. At the same time, the NCCCS data dashboard sheds light on the overall transfer rates of community college students, including which program students were enrolled in before transferring.

Though the NCCCS and UNC Systems currently share some student data, enhancing infrastructure to support data-sharing between these two systems is a critical step to inform policy and improve transfer outcomes. Currently, course-level data is not shared in a way that allows for critical analyses of how students are navigating, succeeding, or falling short as they move through courses between 2- and 4-year institutions. With stronger data-sharing in place, researchers and policymakers would have a better understanding of the community college students who might have *intended* to transfer, based on indicators such as enrolling in transferable courses, but did not successfully enroll at a university. An enhanced data-sharing arrangement between these two systems would aid the technological aspects of this data, but also support both systems in effectively using this data to better inform policies. Dedicated personnel would be needed to maintain the shared data, develop protocol, and communicate between 2- and 4-year institutions to collect and prioritize the most pertinent questions that this data could inform, and to design ways to share findings with stakeholders.



Support and strengthen the work of the TAC.

The CAA defined the creation of the TAC to oversee refinements and minor changes to the CAA, and conduct institutional visits annually to inform these changes. The committee of eight is comprised of members of the NCCC and the UNC Systems, as well as college and university leaders. This advisory body is currently unfunded, so quarterly meetings and institution visits are at the expense of each member's home institution, which ranges several hundred miles from the coastal plains to the mountains of North Carolina. Even without system supports, this committee has driven efforts to revise the language of the CAA so that is better understood by students, conducted focus groups and interviews to understand how students and colleges are using BDPs, and shared growing trends among AAS transfer students over the last few years. We recommend building on the momentum of this advisory committee by providing funding for members' meetings and by expanding its members to include a broader range of transfer student perspectives.

For example, TAC should be extended to include data analysts from both the NCCCS and UNC system, which would support our previous recommendation to enhance data-sharing. Additionally, we recommend that the TAC includes a member from a NCCCS institution that is experienced with AAS transfer students, and a member from a UNC system institution that could represent transfer experiences and programs that are common among AAS degree earners. Bolstering this existing advisory board is important for the state to have a pulse on the changing needs of students in higher education.

REFERENCES

Atwell, A. K. & D'Amico, M. M. (2021). *Examining the baccalaureate completion of Associate in Applied Science transfers*. Raleigh, NC: Belk Center for Community College Leadership and Research.

Berkner, L., Horn, L., Clune, M., & Carroll, C. D. (2000). *Descriptive summary of 1995-96 beginning postsecondary students: Three years later*. Washington, DC: National Center for Educational Statistics (NCES 2000-154).

D'Amico, M. M., Chapman, L. M., & Robertson, S. (2021). Associate in applied science transfer and articulation: An issue of access and equity. *Community College Journal of Research and Practice*, 45(5), 378-383.
<https://doi.org/10.1080/10668926.2020.1741477>

DeSantis, A., Whatley, M., & Ampaw, F. (2021). *Exploring Pathways to Completion by Field of Study for North Carolina Community College Transfer Students*. Raleigh, NC: Belk Center for Community College Leadership and Research.

Hill, R. L. (2016). *Factors affecting college choice and transfer: A study of the decision-making process of student veterans*. Old Dominion University.



ABOUT THIS BRIEF

Nichols, H. N. & Sublett, C. (2022). *Expanding the Comprehensive Articulation Agreement to Applied Associate Degree Earners: A Transfer Policy Brief*. Raleigh, NC: Belk Center for Community College Leadership and Research.

ACKNOWLEDGMENTS

The following individuals provided feedback and comments on previous drafts: Dr. Bill Schnieder, Associate Vice President of Research and Performance Management at the North Carolina Community College System, Dr. Mark D'Amico, Professor of Education at the University of North Carolina at Charlotte and Belk Center Research Affiliate, and Dr. Eric Fotheringham, Director of Community College Partnerships & Adult Learner Initiatives at University of North Carolina System. Dr. Erin Schleiden provided the graphic design for this report.