



# SHEEO

STATE HIGHER EDUCATION EXECUTIVE OFFICERS ASSOCIATION

## PROMOTING TRANSPARENCY AND ACCOUNTABILITY IN NORTH CAROLINA

### EFFECTIVE USE OF STATE DATA SYSTEMS

DENISE PEARSON  
JOHN ARMSTRONG



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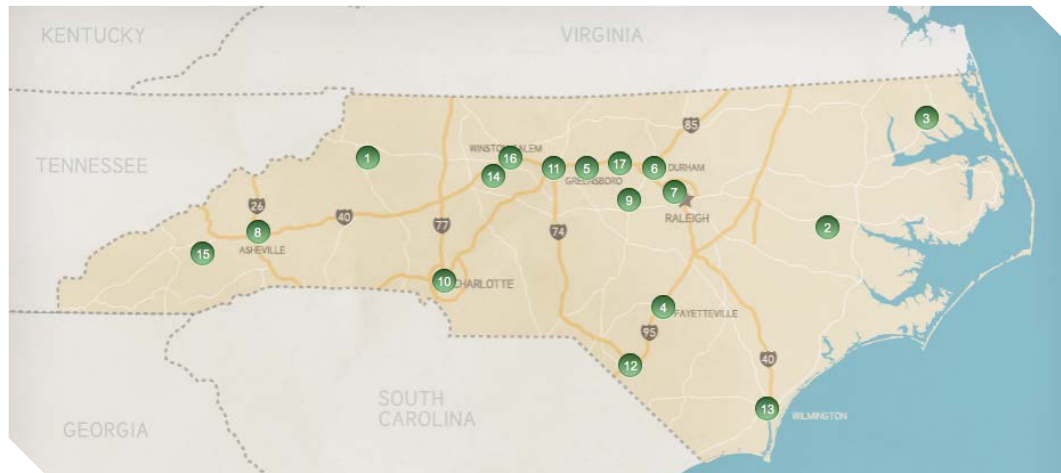


## INTRODUCTION

Analysis of student-level data to inform policy and promote student success is a core function of executive higher education agencies. Postsecondary data systems have expanded their collection of data elements for use by policymakers, institutional staff, and the general public. State coordinating and governing boards use these data systems for strategic planning, to allocate funding, establish performance metrics, evaluate academic programs, and inform students and their families. The State Higher Education Executive Officers association (SHEEO), as part of a project funded by the Bill & Melinda Gates Foundation (BMGF), surveyed state coordinating and governing boards on their collection and use of postsecondary student-level data. Following this, SHEEO identified seven states whose survey responses indicated an exemplary use of data in specific subject areas. In-person interviews were conducted by SHEEO agency staff in seven states selected for follow-up. In 2015, SHEEO visited the University of North Carolina to discuss teacher preparation data, reverse transfer, and database structures.

In complex political and social environments where the demand for transparency and accountability is on the rise, the University of North Carolina (UNC) has succeeded in meeting that demand through its development of an integrated, public, postsecondary data system designed to meet the diverse needs of key stakeholders including policymakers, institution leaders, faculty, students, and communities. The University of North Carolina's new Data Dashboard is the result of the system's commitment to building a culture of data driven decision-making and public trust, with an emphasis on strategic planning, collaboration, and continuous improvement. This paper highlights the innovative work of the University of North Carolina, including its collaboration with the state's 58 community colleges. The system's new Interactive Data Dashboard offers other institutions of higher education a model for transforming the nature and application of institutional data.

UNC is a public university system serving more than 200,000 students annually, with a Board of Governors serving as the policymaking body responsible for the oversight and governance of the 17-campus system. UNC's campuses are located in cities across the state as illustrated in the map below. Contextual parameters for this paper include data systems relative to educator quality and reverse transfer programs. Transparency, accountability, and assessment capacity-building to foster data driven decision-making processes were universal goals of UNC's work discussed in this paper.



Source: <https://www.northcarolina.edu/content/our-17-campuses>

- |  |  |
|--|--|
| <b>1.</b> Appalachian State University, Boone, NC              | <b>10.</b> UNC Charlotte, Charlotte, NC                                    |
| <b>2.</b> East Carolina University, Greenville, NC             | <b>11.</b> UNC Greensboro, Greensboro, NC                                  |
| <b>3.</b> Elizabeth City State University, Elizabeth City, NC* | <b>12.</b> UNC Pembroke, Pembroke, NC**                                    |
| <b>4.</b> Fayetteville State University, Fayetteville, NC*     | <b>13.</b> UNC Wilmington, Wilmington, NC                                  |
| <b>5.</b> North Carolina A&T State University, Greensboro, NC* | <b>14.</b> UNC School of the Arts, Winston-Salem, NC                       |
| <b>6.</b> North Carolina Central University, Durham, NC*       | <b>15.</b> Western Carolina University, Cullowhee, NC                      |
| <b>7.</b> North Carolina State University, Raleigh, NC         | <b>16.</b> Winston-Salem State University, Winston-Salem, NC               |
| <b>8.</b> UNC Asheville, Asheville, NC                         | <b>17.</b> North Carolina School of Science and Mathematics, Durham, NC*** |
| <b>9.</b> UNC at Chapel Hill, Chapel Hill, NC                  |  |

\* Historically Black Colleges and Universities (HBCU)

\*\* Historically American Indian Liberal Arts University

\*\*\* Public residential high school focused on science, technology, engineering, and math (STEM)

UNC's drive toward increased accountability, transparency, and a culture of data driven leadership is aligned with the Department of Education 2015 executive actions established to promote transparency and accountability in higher education to ensure that institutions are effectively serving students and families while staying accountable for taxpayer dollars, according to Cecilia Muñoz, director of the Whitehouse Domestic Policy Council.<sup>1</sup>

The survey administered to UNC administration as part of SHEEO's Strong Foundations project provided foundational information for this paper. Survey responses revealed that, in 1980, UNC established its student unit record system in response to federal civil rights mandates. These data were collected to inform policymaking at the system and institution levels, and reports (including critical statistical information) were generated for a wide range of purposes and stakeholders. Over the years, UNC has exceeded federal data collecting mandates and reporting requirements, underscoring the University's commitment to transparency and accountability. The next section of this paper provides an in-depth examination of UNC's approach to accountability and transparency with intentionality around collaboration.

Informed by survey results, a series of follow-up campus interviews, information retrieved from the UNC website and follow-up phone conversations, this paper presents a model for data administration rooted in principles of effective change management and collaboration. To further our understanding, campus interviews were conducted by SHEEO policy staff with UNC leadership and staff from Academic Affairs, Data and Analytics, and Information Technology.

1. Cecilia Muñoz, "Promoting Greater Transparency and Accountability in Higher Education," 2015. Retrieved August 23, 2016. <https://www.whitehouse.gov/blog/2015/11/23/promoting-greater-transparency-and-accountability-higher-education>

## ACCOUNTABILITY AND TRANSPARENCY THROUGH COLLABORATION

In 2015, North Carolina passed legislation requiring cross-agency data sharing (House Bill 401-Authorize Data Sharing for North Carolina Longitudinal Data System) to enhance meaningful communication around common state issues such as education, workforce outcomes, and graduation.<sup>2</sup> The legislation underscores the North Carolina legislature's mandate to expand the uses and accessibility of data. Although cross-sector sharing previously occurred at UNC, a new data dashboard improved its effectiveness and the capacity to do so in a very different way, according to Alisa Chapman, vice president for Academic and University Programs. Responding to persistent internal and external forces calling for meaningful data for use by multiple stakeholders and for multiple purposes, UNC's Data Dashboard represents an innovative and promising approach for increasing transparency and institutional accountability, while strengthening a culture of data driven decision-making.

The prototypical UNC Interactive Data Dashboard is the result of a collaboration with SAS, through which the goals to promote accountability and transparency were reportedly achieved. Although this paper focuses on just two of the eight components of the Data Dashboard, comparable levels of deep collaboration were required to achieve the same measure of results as those illustrated in the "Transfer Students" and "Educator Quality" components of the Data Dashboard. UNC was well positioned to launch the entire Data Dashboard due to extensive collaboration with institutional leadership about building capacity for data usage and strategic planning. Furthermore, there is now enhanced capacity for greater responsiveness to the general public seeking information. In essence, the data presented in the Dashboard represent efforts to be more public and to make data more accessible, according to Chapman.

The Dashboards are the public face of UNC data, and at the same time that they were being developed UNC also embarked on an overhaul of its processes for sending, receiving, and storing institutional data into a central Student Data Mart. According to Dan Cohen-Vogel, Associate Vice President for Data and Analytics, UNC leadership acknowledged the need for a more future-looking data system, which would require significant and sustained investment and necessitate buy-in throughout the 17-campus system. The intentional process included a preliminary survey of a wide representation of internal stakeholders including the departments of Institutional Research, Information Technology, the Registrar, Admissions, and others. Because previous data systems were largely accessible by only a small set of programmers, it was important for this initiative to facilitate a "from-the-ground-up development." It was noted by Cohen-Vogel that "we're never going to get away from the day when somebody with skills is needed to access the data. It's just that a lot more people can get at it, there's a lot more transparency about how everything is derived and the frequency of collection, and which ones are for reporting instances, and which ones for testing purposes. There is just a lot more information about the data and how to use the data now."

The system building process involved rolling out a baseline code with teams assigned to every constituent institution. Teams engaged in planning with campus representatives from each of the surveyed areas, and asked, "This is the baseline; how does it actually work in your Banner® or PeopleSoft® system; and where do you find this?" The aim was to make sure staff were customizing data for their campuses, applying business practices, or changing business practices where necessary. According to multiple UNC representatives, the process was reportedly as valuable as the data system itself. Additionally, giving Institutional Research units the opportunity to shift resources from creating UNC General Administration files to creating some

2. North Carolina House Bill 401-Authorize Data Sharing for North Carolina Longitudinal Data System.  
<http://www.ncleg.net/Sessions/2015/Bills/House/PDF/H401v2.pdf>

value added analysis for their university was a huge part of the vision. Other benefits of this system are “creating one version of the truth; creating a shared service; just creating a broader access or a broader analytical capacity for all of us,” according to Cohen-Vogel.

The high level of collaboration required the various users to ensure the data were accurate by providing opportunities to fix errors on the front end of reporting. UNC’s process was focused from the beginning on developing a sense of shared data governance with common ground rules. It was also built with an understanding that it must support important state and federal reporting and other strategic projects, such as North Carolina’s State Longitudinal Data System (SLDS) and the Reverse Transfer system developed jointly by UNC and the state’s community college system.

Another highlighted benefit of building stronger data integrity included a process where all the people who needed to be at the table were at the table (those responsible for the business practice—registration, admission, financial aid, etc.). They were the people inputting the data and helping to make sure UNC was pointing at the right place to get the intended information. The process and its outcomes were not without challenges, but data integrity, systematic data governance, and improved communication between universities and community colleges remained the focus. In the short run, this has built stronger communication and data quality, and in the longer term it is expected to free up time to increase analytical capacity, both because it reduces some of the historical workload for the institutional research units and because the Data Mart is now the foundation upon which analytical and business intelligence tools can sit.

The Data and Analytics unit staff led efforts to focus on structural issues to standardize data inputs and outputs in a way that would make the data more accessible to the public. Development of the Student Data Mart began in early 2013 in alignment with the UNC Interactive Data Dashboard. Although the Student Data Mart will support dashboards going forward, and currently makes it easier to build interactive tools, one is not dependent on the other; they are two separate projects. According to an interviewee, “What we tried to do with the Student Data Mart project is make sure we could align the interest of the data owners and those who are charged with reporting from it. We devised the data system based on different categories of student supports and then met with all of the key areas to ask, ‘Does this definition work with your current practice?’” Also noted were the big gains in data quality. The burden has shifted from Data and Analytics to the actual data owner—the office inputting the data. For example, instead of campus institutional research units “cleaning” financial aid data, it is pushed back to the source for cleanup (they are the data owners and the content area experts). According to Cohen-Vogel, UNC developed extensive documentation and a process by which central office teams worked extensively with campus teams to confirm that the items they were pulling from Banner or PeopleSoft aligned with system definitions, that business processes conformed to the extent it made sense, or that definitions, edits, etc., were informed appropriately by the campus processes and enterprise resource planning (ERP) system limitations. For example, they require that all completed applications are moved from the external systems into the ERPs (e.g., Banner) and that campuses report all completed applications to UNC General Administration. Similarly, all completed FAFSAs (Student Information Records [SIRS]) come into the UNC system, not just those associated with financial aid awards.

Perhaps most importantly, according to Cohen-Vogel, UNC does not allow any outside-the-system fixes. “If data need to be corrected, it must be done within the ERP system and retransmitted to the central database.” UNC personnel believe this saves time by making the process more efficient. Data relationships between the campuses and the system have reportedly improved as a result of building the Student Data Mart, because it was built collaboratively. An interviewee reported, “It wouldn’t matter if we had a technically superior design and all that if we didn’t have the people to implement it and the buy-in from campuses to get excited about giving us good data.” Another interviewee recalls positive feedback from institutional research on campuses: “Thank you for pushing the onus on the data back to the person who should be responsible for it; thank you for making our registrars clean their course data. They’re starting to see the value.”

Cohen-Vogel recalls the large amount of planning and preparatory work that preceded the initial rollout of the new Data Mart system to the campuses, including four to six months of building the baseline code, of planning timelines, etc. “It’s an efficiency gain,” according to a member of the Data and Analytics unit. This system makes it a more efficient and less manual process and gives us the capacity to efficiently address questions of external and internal stakeholders.” In addition to efficiency, transparency, and accountability, there is a political value as well.

The following discussion examines UNC’s innovative dashboards, with emphasis on two data portals—Educator Quality and Transfer Students.

## THE UNC DATA DASHBOARD

Institutions of higher education track a variety of data that augment IPEDS data, such as faculty salaries, research expenditures, rankings, research output, and faculty reputation. Such information systems are typically anchored and in through an office dedicated to institutional research and assessment, with variability in naming, how they operate, and in how they are structured. Regardless, they are commonly responsible for collecting, reporting, and providing analytic data for compliance purposes and to enhance decision-making. Some data and reports are widely available, including to the public, as evidenced by UNC’s innovative Interactive Data Dashboards.

The UNC Data Dashboard (henceforth Data Dashboard) is described on the UNC website as an “interactive, online database that gives students, parents, policymakers and taxpayers expanded access to detailed system data on selected core measures. This new tool reflects UNC’s commitment to increase transparency, better track and measure our productivity, efficiency, and impact; and demonstrate greater accountability to the people of North Carolina.”<sup>3</sup> University officials acknowledged the generous support received from SAS® for the development of the Data Dashboard.<sup>4</sup>

The Data Dashboard is user-friendly and clearly organized by eight categories of data and information:

1. Enrollment
2. Freshmen Admissions and Performance
3. Transfer Students
4. Research and Development
5. Degrees
6. Educator Quality
7. Facilities Usage
8. Jobs for NC

3. University of North Carolina. UNC Data Dashboard. <https://www.northcarolina.edu/about-our-system/special-initiatives>

4. University of North Carolina. UNC Infocenter. <https://www.northcarolina.edu/infocenter#interactiveData>



The chart below summarizes each of the aforementioned categories.

CATEGORY	OVERVIEW
Enrollment	Enrollment trends across the 16-campus UNC system (excludes NC School of Science and Mathematics).
Freshmen Admissions and Performance	Admissions and performance information about high school graduates pursuing degrees at all universities. Graduation rate information. Peer comparisons.
Transfer Students	Trend data on transfer student enrollment, first-year performance, and graduation rates.
Research and Development	Trends in research and sponsored programs including award totals for external funding as well as the sources of those funds, and information about the number of commercial innovations coming out of the University.
Degrees	Data on degrees awarded over the past ten years; data can be sorted by level of degree, field of study and demographics.
Educator Quality	Interactive online tool for viewing and analyzing data reflecting UNC progress towards the goal of augmenting the quantity and quality of public school educators serving North Carolina's students.
Facilities Usage	View classroom and instructional laboratory usage at multiple levels (rooms and seats, by day and by hour) including comparisons to norms and historical trends.
Jobs for North Carolina	Through a partnership with the Department of Commerce's Labor and Economic Analysis Division (LEAD), UNC tracks employment outcomes of students who stay and work in NC. In-depth information is presented through NC's Tool for Online Workforce and Education Reporting (NC TOWER), providing post-graduation employment, wages and other education outcome details.

Source: <https://www.northcarolina.edu/content/unc-data-dashboard>

The notion of effective data systems has been studied over the years, including by Thomson Reuters (2010), which identified five top essentials of model data systems:

1. Standard Definitions
2. Broadly Accessible Data
3. Timely Updates
4. Multiple Performance Measures
5. Data Granularity.<sup>5</sup>

The data and information contained within the Data Dashboard exhibit these essentials and the Dashboard is offered as an exemplar for consideration by any institution seeking to upgrade the effectiveness of its current data and reporting systems. UNC's work in this area is particularly impressive given its diversity of institutions and the value they ascribe to cross-institutional communication. The next section of this paper highlights the two categories of data mentioned above—transfer students and educator quality.

5. Thomson Reuters. "Finding Meaningful Performance Measures for Higher Education: A Report for Executives." Retrieved August 23, 2016 from [http://ip-science.thomsonreuters.com/m/pdfs/exec\\_report\\_provosts.pdf](http://ip-science.thomsonreuters.com/m/pdfs/exec_report_provosts.pdf).

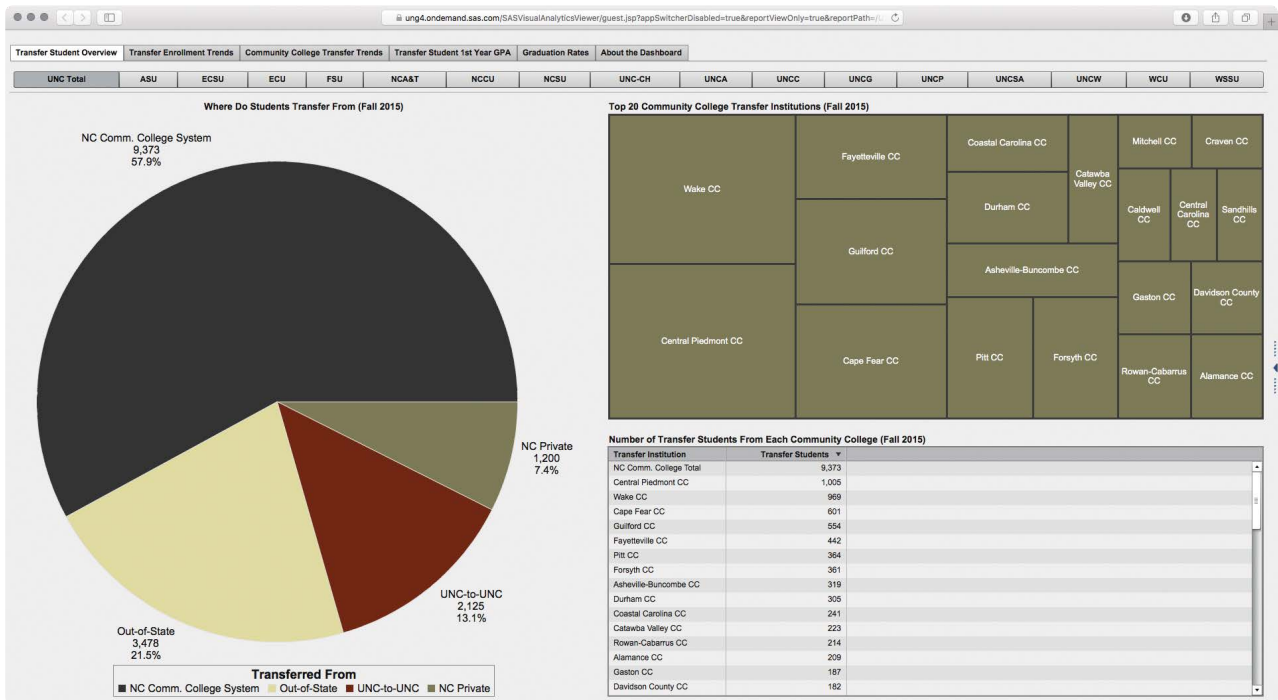
## UNC DATA DASHBOARD: TRANSFER STUDENTS AND THE REVERSE TRANSFER PROGRAM

Policymakers and institution leaders are increasingly interested in performance metrics concerning transfer students, defined by UNC as “students entering the reporting institution and known to have previously attended a postsecondary institution at the same level (e.g., undergraduate).”<sup>6</sup> Nationwide, transfer students are significant in number although sometimes understudied in policy and research discussions. A 2015 report released by the National Student Clearinghouse Research Center highlights the fact that one-third of all students switch institutions at least once before earning a degree.<sup>7</sup> The report’s findings highlight the complex nature of higher education and underscore the need for multiple ways of describing concepts of student success and institutional effectiveness. The report endorses the practice of collecting and analyzing data on outcomes for all students regardless of their enrollment status, including transfer-in and transfer-out students, for the benefit of policymakers and students. States and institutions seeking to increase college attainment must pay attention to completion data for transfer students. However, Logue (2014) asserts that holding institutions accountable for the success of transfer students is challenging in the absence of meaningful data. Logue further asserts that “without attending to transfer students’ particular circumstances as reflected in their data, without incentivizing colleges to help these students graduate and facilitating their credit transfer, increasing the United States’ percentage of young adults with college degrees will be far more difficult.”<sup>8</sup>

The Data Dashboard collects and disseminates data on transfer students across the system. Data and information are contained under the Transfer Students link of the Data Dashboard, providing general information on transfer students, transfer enrollment trends, community college transfer trends, transfer students’ first-year GPA (grade point average), and graduation rates. The screenshot below from the UNC Data Dashboard illustrates the robust nature of UNC’s transfer student data. The data are also disaggregated by institution.<sup>9</sup>

6. University of North Carolina. From link, click on the tab “About the Dashboard” [https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer\\_enrollment\\_report](https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer_enrollment_report)
7. National Student Clearinghouse Research Center. (2016) *Snapshot Report: Postsecondary Student Mobility*. [www.nscresearchcenter.org](http://www.nscresearchcenter.org). Retrieved April 11, 2016.
8. Alexandra Logue, “Wither Thou Goest, I Will Go,” *Inside Higher Education*, November 20, 2014. Retrieved April 11, 2016, from <https://www.insidehighered.com/views/2014/11/20/essay-importance-transfer-students-increasing-college-completion-rate>.
9. University of North Carolina Transfer Student Data. [https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer\\_enrollment\\_report](https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer_enrollment_report)

## TRANSFER STUDENT DATA – UNC TOTAL



Source: [https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer\\_enrollment\\_report](https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?appSwitcherDisabled=true&reportViewOnly=true&reportPath=/UNG/External+Content/Reports&reportName=transfer_enrollment_report)

Transfer student data is also collected to support UNC’s Reverse Transfer Program, which represents collaboration between North Carolina’s (NC) 58 community colleges and UNC’s 16 constituent universities (excludes the North Carolina School of Mathematics and Science). Students who transfer to a NC university from a participating NC community college are given the opportunity to combine credits earned at the university with credit previously earned at the community college to determine if associate degree requirements have been met. North Carolina community colleges and UNC institutions began participating in the NC Reverse Transfer Program in July 2015. According to a UNC representative, year one of the initiative resulted in 665 more associate degrees conferred to students (a 12% increase over one year for the community college system). North Carolina community colleges conferred almost 29,000 degrees in 2014-15, based on most recent IPEDS data. The total through reverse transfer exceeded 2,100 through the end of 2015, according to Cohen-Vogel.

The Reverse Transfer Program is aligned with UNC’s Student Data Mart, which provides transfer student transcript data to the community colleges according to specifications recommended by the community colleges. “Here’s how we want to see it [data],” according to an interviewee. To that end, actual and agreed upon course equivalencies are listed next to the university courses on student transcripts. The program is reinforced by a comprehensive articulation agreement, which is a statewide agreement governing the transfer of credits between NC community colleges and NC public universities. (North Carolina Community Colleges: Comprehensive Articulation Agreement).<sup>10</sup>

10. North Carolina Comprehensive Articulation Agreement. <http://www.nccommunitycolleges.edu/academic-programs/college-transferarticulation-agreements/comprehensive-articulation-agreement-caa>.

Community colleges run degree audit and missing credit reports each semester. The goal is to identify and advise students who have the requisite credits to graduate. In cases where students have attended multiple community colleges, the institution that had the most hours for the student gets credit for the reverse transfer. In practice, and with student agreement to release transcript data, each of the 16 universities sends data to all 58 community colleges to perform degree audits for the associate degree. UNC's Transfer Student: Reverse Transfer Program is aligned with the Clearinghouse Reverse Transfer Project as a "major step in improving higher education outcomes, which will benefit us as a nation. More students will get the degrees they deserve. Community colleges will be recognized for the value they add to education. And by granting more degrees, states will be better positioned to attract new business," according to Walter G. Bumphus, president and CEO of the American Association of Community Colleges.<sup>11</sup>

## UNC DATA DASHBOARD: EDUCATOR QUALITY

The UNC Board of Governors met in February 2015 and endorsed several strategic recommendations on teacher and school leader quality intended to strengthen and focus UNC's educator preparation programs (EPPs) with the aim of building a world-class educator workforce to support student success in North Carolina's public schools. An educator preparation program (also referred to as a teacher preparation program) refers to a state approved course of study. When students complete an approved course of study, they are assumed to have met all educational and clinical requirements for certification or licensure to teach at the primary or secondary level in the state's schools.

In collaboration with SAS® Institute, UNC responded to an explicit major recommendation—the development of a public, interactive, web-based tool to help create greater public accountability, transparency, and public access for all education stakeholders. The resulting exemplary Educator Quality Data Dashboard provides mandated comprehensive and public access to UNC's research data on the performance of educator preparation programs across the 15 campuses offering this option of study (UNC School of the Arts and the NC School of Science and Mathematics do not offer an EPP). The EPP performance outcomes and indicators are provided according to the categories below:

- Recruitment and Selection (Selection Criteria, Academic Profile Comparisons, and Licensure Exam Results);
- Educator Preparation (Enrollment Trends, Clinical Experiences, and Time to Degree);
- Performance and Employment (Preparation Pathways, Retention Rates, Recent Graduate Surveys, Program Effectiveness Report, Value-Added Models, Teacher Evaluation Ratings, Employment Distribution, and Job Placement Rates, School Administration Program Data [School Characteristics of NC Principals and Individual Characteristics of NC Principals]; and
- University-School Partnerships (mapped data on each university-school partnership by county and institution).<sup>12</sup>

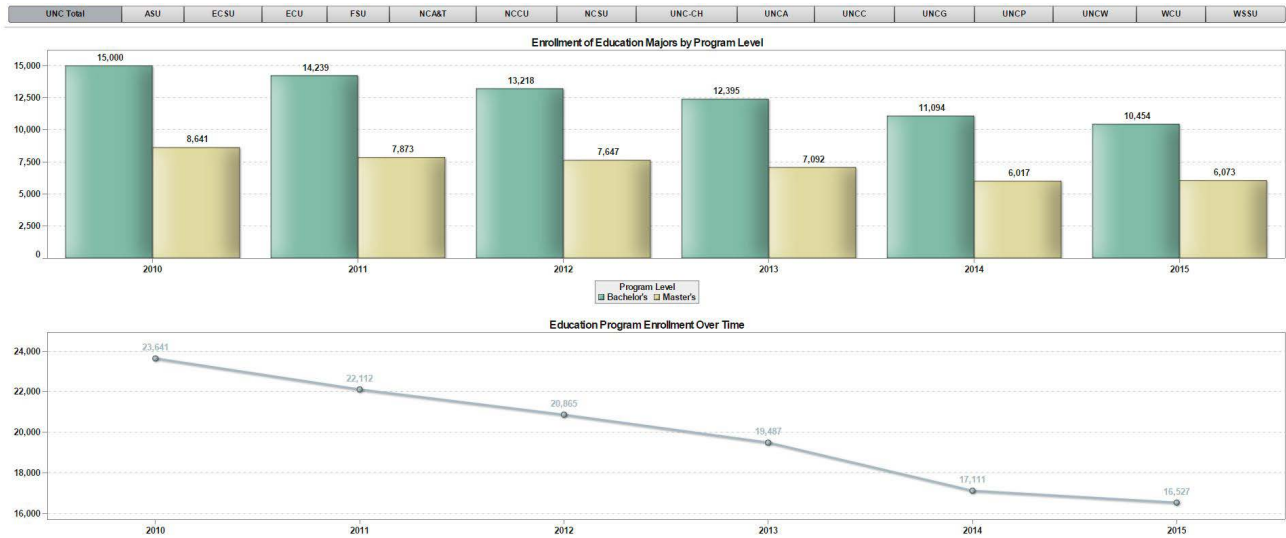
**Note:** UNC's SAS® EVAAS™ (Education Value-Added Assessment System) is currently under development and reportedly uses test scores from a variety of assessments and follows individual students over time to provide reflective value-added reports to assess the effectiveness of districts, schools and teachers. This indicator will include EVAAS estimates of teacher effectiveness by institution, grade level, and subject area.

11. Walter G. Bumphus (quoted). National Student Clearinghouse. Reverse Transfer Project. [www.reversetransfer.org](http://www.reversetransfer.org).

12. UNC Educator Quality Dashboard. <http://eqdashboard.northcarolina.edu>

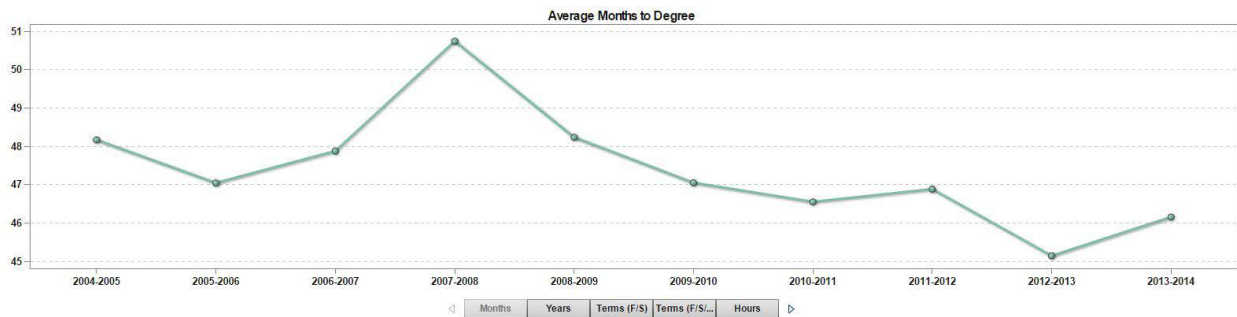
The screenshots below from the UNC Data Dashboard illustrate the robust nature of UNC's Educator Quality Dashboard. In these examples, Total Enrollment of Education Majors by Program Level and Average Months to Degree are also disaggregated by each institution.

### TOTAL ENROLLMENT OF EDUCATION MAJORS BY PROGRAM LEVEL



Source: <https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?reportPath=/UNG/External+Content/Reports&reportName=TQD+Enrollment+Trends&appSwitcherDisabled=true&reportViewOnly=true>

### AVERAGE MONTHS TO DEGREE



**Time-to-Degree Trend Data**

Year	N (Sample Size)	Bachelor's				
		Average Months to Degree	Average Years to Degree	Average Number of Terms (Fall/Spring)	Average Number of Terms (Fall/Spring/Summer)	Average Credit Hours Earned
2004-2005	391	48.17	4.01	7.76	9.04	142.91
2005-2006	427	47.04	3.92	7.69	9.25	143
2006-2007	401	47.88	3.99	7.73	9.58	143.18
2007-2008	429	50.74	4.23	8.01	9.8	142.86
2008-2009	543	48.24	4.02	7.93	9.82	142.81
2009-2010	586	47.05	3.92	7.67	9.22	142.78
2010-2011	532	46.55	3.88	7.77	9.43	142.84
2011-2012	572	46.88	3.91	7.88	9.28	142.11
2012-2013	493	45.15	3.76	7.77	9.12	141.91
2013-2014	479	46.16	3.85	7.81	9.34	143.12
2014-2015	21	46.48	3.87	7.38	9.38	146.86

Source: <https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?reportPath=/UNG/External+Content/Reports&reportName=TQD+Time-to-Degree&appSwitcherDisabled=true&reportViewOnly=true>

From the outset of the Data Dashboard project, it was important for academic offices to be engaged. The collaboration leading to the Educator Quality Dashboard was led in large part by Alisa Chapman, who described a longstanding and productive relationship with the deans of educator preparation programs at the 15 constituent universities with EPPs (excludes North Carolina School of the Arts and School of Science and Mathematics). In consultation with deans, Chapman started thinking through what educator quality outcomes and indicators were needed and for what purposes. Parallel to those conversations, the UNC Board of Governors convened a special task force to closely examine teacher preparation and school leader preparation. The task force allotted considerable time to visiting constituencies across the state and nation. They visited UNC colleges of education. They visited public school representatives in groups and individually. They convened forums to get input about particular issues that concerned them.

Specifically related to educator quality in the state, policymakers and other stakeholders were asking, “What are you doing to change the outcomes? How are you going to use research to drive program improvements?” According to Chapman, this was a turning point that would require a cultural shift requiring a substantial amount of change at the institution level. A major shift included moving from a narrow focus on teacher quantity to including teacher quality in the discussions and analyses. North Carolina committed to a process of measuring the number of teachers they were producing as well as a process for measuring graduates’ effectiveness and impact on North Carolina public schools. As part of the process, UNC established a memorandum of understanding (MOU) with the National Council on Teacher Quality (NCTQ), an educator preparation research and policy group. The MOU granted NCTQ access to certain EPP-related UNC databases.

To complement collaborative efforts to prepare quality teachers for North Carolina’s public schools, the Office of State Human Resources hosts regional personnel administrator meetings that include the State Board of Education, dividing the state into eight education regions. The Educator Quality Dashboard provides information that can now be used to inform hiring decisions in school districts. Chapman explained that policymakers and public school partners are beginning to understand the interactive dashboard and how it can help to inform decisions. “We’ve done a really good job in connecting the dots.” Chapman did acknowledge fear on campuses concerning how data gets used, and expressed the need for continued work in this area of communication. UNC produces value-added models that control for 36 different co-variants to equalize the playing field. Data is aggregated back to educator preparation programs and not individuals. UNC’s research on the impact of teacher preparation programs on student achievement, measured in terms of their students’ performance on state tests of knowledge and skill, shows how graduates of UNC teacher education programs compare (a) with teachers educated at other colleges and universities, both within and outside of North Carolina, (b) with teachers who entered teaching via other routes, such as “alternative entry” from other occupations, (c) from campus to campus within the UNC system, and (d) from program to program within the system.

To strengthen transparency and accountability aims, UNC also engaged five institutions to pilot an assessment instrument to evaluate teacher candidates (student teachers). Developed by Stanford University, edTPA (education teacher performance assessment) is a performance-based, subject-specific assessment and support system used by educator preparation programs to emphasize, measure, and support the skills and knowledge teachers need to be effective in the classroom. Chapman asserts that edTPA is a valid instrument that shows great promise of predictive validity and notes the recommendation from the UNC Board of Governors that all institutions have valid and reliable assessment instruments. Although using edTPA, per se, is not mandated, Chapman believes edTPA is a way to begin to drive change at a policy and system level.

When asked if access to more robust, accurate, and more widely accepted data has changed UNC educator preparation programs, Chapman expressed optimism about the potential for a positive impact: “The deans love this research. They are data driven and focused on outcomes.”



## SUMMARY

UNC representatives are aware of the current social and political environments in which higher education operates, including a marketplace that is pushing business-intelligence-like global tools for local analysis, like SAS®, to analyze higher education outcomes. The success of the UNC Data Dashboard was college driven to a large extent and institutional leaders recognized their unique needs for data analysis, in particular, the tools that would empower data users to make more effective decisions. There was also system-wide consensus and interest in building an infrastructure where data analytic tools would be used consistently across the 58 community colleges and 16 universities.

Details about what it would entail to build such an infrastructure and what the benefits and costs would be resulted from initial conversations with the Data and Analytics unit, which brought affected personnel together at UNC Greensboro for an all-day meeting. “Talking them through what the work would entail, what would be involved, what the ups and downs would be, the costs and benefits—this was initiated from within. And bringing that up to leaders and saying ‘this is why we need this project,’” was essential to the process, according to Cohen-Vogel.

This high level of collaboration and shared responsibility has led to increased institutional effectiveness and efficiency. There’s no going back; it would be costly and painful and frustrate everybody to go back, according to staff. Ongoing progress is supported with annual meetings that include staff from the Offices of the Registrar and Information Technology, to discuss data usage in addition to policy updates or changes that affect data. Monthly calls focusing on the Data Dashboard include the Offices of Data and Analytics, Information Technology, Financial Aid, and any functional owner who has data coming through the system. The goal is to manage the flow of communication. It’s a perpetual effort, according to one staff member who said, “It’s not simply a matter of technology—it’s also people and culture.” In essence, the success of UNC’s Data Dashboard is an exemplar of balancing process with a focus on outcomes.

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3035 CENTER GREEN DRIVE, SUITE 100, BOULDER, COLORADO, 80301  
303.541.1600 • [SHEEO.org](http://SHEEO.org)

