

## **Education Cabinet Data Workgroup**

### **Longitudinal Data Pilot Research Project**

#### **Project Summary:**

The goal of the project is to attempt to utilize data from the NC SchoolWorks System (NC P-20W System) to track outcomes of the three public high school graduate cohorts (2013-2014, 2014-2015, 2015-2016). Data from DPI were matched to the enrollment and completion data from NCCCS and UNC as well as to the Unemployment Insurance (UI) wage records to generate post-graduation education and employment outcomes.

Data from DPI and UNC were extracted via the NC SchoolWorks System. NCCCS data were derived from information provided by NCCCS to the Common Follow-up System (CFS). Wage information were obtained via the link from NC SchoolWorks to the CFS. The list below provides information regarding data used in the analysis.

- **NC Department of Public Instruction (DPI):** High school enrollment and graduation data for the three high school cohort graduates (2014, 2015, and 2016). Selected data elements included student UID numbers, Local Education Agencies, school information, and some demographics.
- **University of North Carolina System (UNC):** Enrollment information including student UID, campus information, enrollment (career) level for 2015-2018 academic school years. The match of student's Social Security Number (SSN) to UID was done via the crosswalk provided by the UNC. The analysis includes enrollment in degree programs and does not include enrollment in short-term training programs as the UNC does not have a centralized data system to collect this information. Additional data on graduation and degrees awarded were supplemented by the CFS for the Sankey diagram in Figure 1.
- **NC Community College System (NCCCS):** Enrollment information including intended degree level, program of study and award for 2015-2018 academic school years was provided by the CFS. The data reflects student enrollment in curriculum programs including Applied Sciences, College Transfer, and General Education programs.
- **NC Department of Commerce:** Employment status was determined using UI wage information provided by the Division of Employment Security regarding individuals working in jobs covered by North Carolina's UI laws. Wage data for calendar quarters between Q1 2014 and Q4 2017 with corresponding student UIDs was obtained through NC SchoolWorks System. Wage information reflects total quarterly wages and is not available for individuals who work outside of North Carolina; are employed in North Carolina but not covered by North Carolina's UI laws (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers); are enrolled in the military; or are employed by the federal government.

#### **Method for Matching Records:**

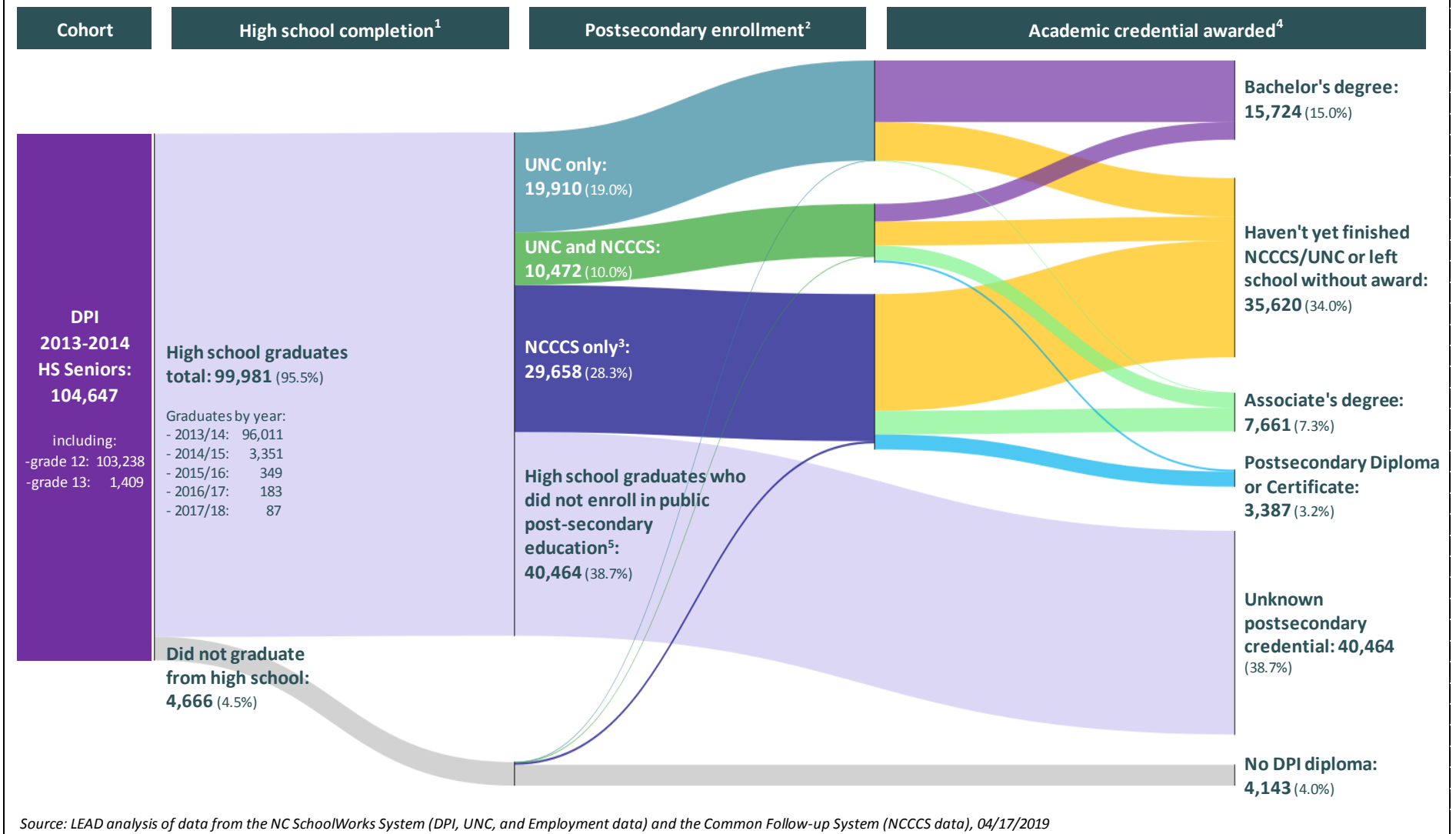
Matching students across agencies was achieved by using UID assigned by DPI. When supplementary data was obtained from the CFS (which utilizes social security number as the major individual identifier), the SSN to UID crosswalk was applied.

**Figure 1** - plots education pathway by year for the 2013-2014 public high school senior cohort. Note that total high school completion count includes those graduated between 2014 and 2018.

**Table 1** - follows education and employment outcomes by year for three public high school graduate cohorts.

**Figure 2** - plots education and employment outcomes by year for 2013-2014 public high school graduate cohort.

Figure 1. Education Pathway of 2013-2014 Public High School Seniors



1. High school completion for 2013-2014 seniors was determined based on their graduation status between 2014 and 2018 academic school years.
2. Students' post-secondary enrollment was determined based on their academic placement between July 2014 and June 2018.
3. NCCCS enrollment data may differ from this analysis after the completion of NCCCS' UID enhancement project. The data reflects student enrollment in curriculum programs including Applied Sciences, College Transfer, and General Education programs.
4. Academic credentials reflect awards earned as of December 2018 and may include duplicate counts, e.g. a student who earned Bachelor's and Associate's degrees will be reported twice under each outcome.
5. Students may be enrolled in continuing education or non-curriculum programs at NCCCS, short-term trainings at UNC, in-state private institutions, or out-of-state institutions. While NCCCS provides data for continuing education or non-curriculum programs, UNC doesn't have a centralized data collection for short-term trainings.

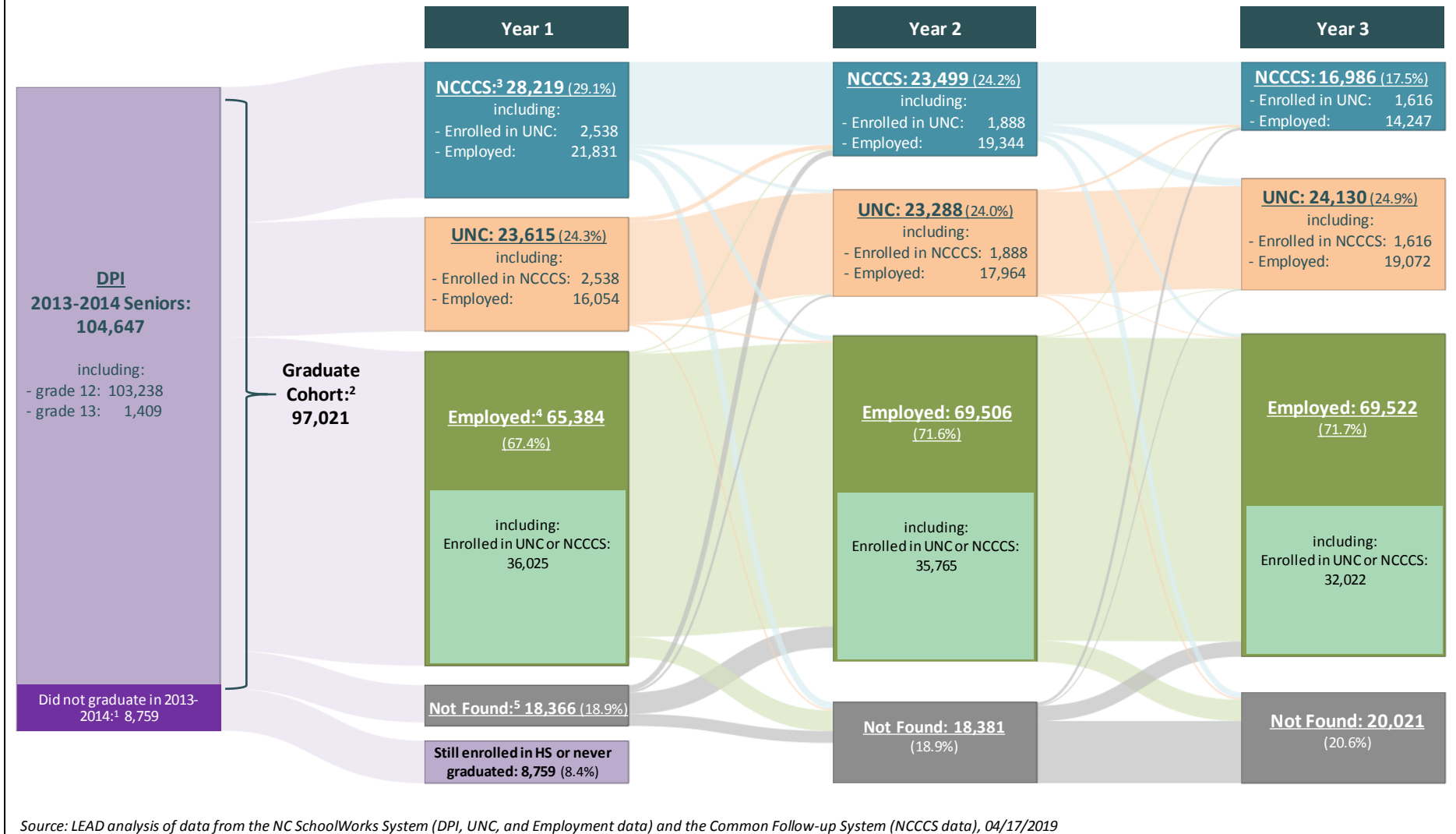
**Table 1. Post Public High School Senior Year Outcomes**

|                                                                 | HS Senior Cohorts (Grade 12 or 13) |                     |                      |                           |                |                     |                           |                |                     |
|-----------------------------------------------------------------|------------------------------------|---------------------|----------------------|---------------------------|----------------|---------------------|---------------------------|----------------|---------------------|
|                                                                 | Cohort 1:<br>2014 Seniors          |                     |                      | Cohort 2:<br>2015 Seniors |                |                     | Cohort 3:<br>2016 Seniors |                |                     |
| <b>Count of Unique Students (Grade 12 or 13)</b>                | <b>104,647</b>                     |                     |                      |                           | <b>106,805</b> |                     |                           | <b>107,712</b> |                     |
| Grade 12                                                        | 103,238                            |                     |                      |                           | 105,177        |                     |                           | 106,098        |                     |
| Grade 13                                                        | 1,409                              |                     |                      |                           | 1,630          |                     |                           | 1,616          |                     |
| <b>Count of Unique Graduates<sup>1</sup></b>                    | <b>97,021</b>                      | <b>1 Year After</b> | <b>2 Years After</b> | <b>3 Years After</b>      | <b>99,495</b>  | <b>1 Year After</b> | <b>2 Years After</b>      | <b>101,656</b> | <b>1 Year After</b> |
| <b>Enrolled in UNC or NCCCS</b>                                 |                                    | <b>49,296</b>       | <b>44,899</b>        | <b>39,500</b>             |                | <b>49,849</b>       | <b>45,173</b>             |                | <b>48,989</b>       |
| - as % of all graduates                                         |                                    | 50.8%               | 46.3%                | 40.7%                     |                | 50.1%               | 45.4%                     |                | 48.2%               |
| Enrolled in UNC or NCCCS and Employed in NC                     |                                    | 36,025              | 35,765               | 32,022                    |                | 37,266              | 36,286                    |                | 36,272              |
| - as % of all graduates                                         |                                    | 37.1%               | 36.9%                | 33.0%                     |                | 37.5%               | 36.5%                     |                | 35.7%               |
| <b>Enrolled in NCCCS (Curriculum Programs Only)<sup>2</sup></b> |                                    | <b>28,219</b>       | <b>23,499</b>        | <b>16,986</b>             |                | <b>27,826</b>       | <b>22,975</b>             |                | <b>26,330</b>       |
| - as % of all graduates                                         |                                    | 29.1%               | 24.2%                | 17.5%                     |                | 28.0%               | 23.1%                     |                | 25.9%               |
| Enrolled in NCCCS and Employed in NC                            |                                    | 21,831              | 19,344               | 14,247                    |                | 22,068              | 19,087                    |                | 20,573              |
| - as % of all enrolled in NCCCS                                 |                                    | 77.4%               | 82.3%                | 83.9%                     |                | 79.3%               | 83.1%                     |                | 78.1%               |
| Enrolled in UNC                                                 |                                    | 2,538               | 1,888                | 1,616                     |                | 2,800               | 2,062                     |                | 2,871               |
| - as % of all enrolled in NCCCS                                 |                                    | 9.0%                | 8.0%                 | 9.5%                      |                | 10.1%               | 9.0%                      |                | 10.9%               |
| <b>Enrolled in UNC (Degree Programs Only)</b>                   |                                    | <b>23,615</b>       | <b>23,288</b>        | <b>24,130</b>             |                | <b>24,823</b>       | <b>24,260</b>             |                | <b>25,530</b>       |
| - as % of all graduates                                         |                                    | 24.3%               | 24.0%                | 24.9%                     |                | 24.9%               | 24.4%                     |                | 25.1%               |
| Enrolled in UNC and Employed in NC                              |                                    | 16,054              | 17,964               | 19,072                    |                | 17,327              | 18,887                    |                | 17,865              |
| - as % of all enrolled in UNC                                   |                                    | 68.0%               | 77.1%                | 79.0%                     |                | 69.8%               | 77.9%                     |                | 70.0%               |
| Enrolled in NCCCS                                               |                                    | 2,538               | 1,888                | 1,616                     |                | 2,800               | 2,062                     |                | 2,871               |
| - as % of all enrolled in UNC                                   |                                    | 10.7%               | 8.1%                 | 6.7%                      |                | 11.3%               | 8.5%                      |                | 11.2%               |
| <b>Employed<sup>3</sup></b>                                     |                                    | <b>65,384</b>       | <b>69,506</b>        | <b>69,522</b>             |                | <b>69,064</b>       | <b>71,944</b>             |                | <b>70,148</b>       |
| - as % of all graduates                                         |                                    | 67.4%               | 71.6%                | 71.7%                     |                | 69.4%               | 72.3%                     |                | 69.0%               |
| Enrolled in UNC or NCCCS and Employed in NC                     |                                    | 36,025              | 35,765               | 32,022                    |                | 37,266              | 36,286                    |                | 36,272              |
| - as % of all employed                                          |                                    | 55.1%               | 51.5%                | 46.1%                     |                | 54.0%               | 50.4%                     |                | 51.7%               |
| Employed and not Enrolled in UNC or NCCCS                       |                                    | 29,359              | 33,741               | 37,500                    |                | 31,798              | 35,658                    |                | 33,876              |
| - as % of all employed                                          |                                    | 44.9%               | 48.5%                | 53.9%                     |                | 46.0%               | 49.6%                     |                | 48.3%               |
| <b>Enrolled in UNC or NCCCS or Employed in NC</b>               |                                    | <b>78,655</b>       | <b>78,640</b>        | <b>77,000</b>             |                | <b>81,647</b>       | <b>80,831</b>             |                | <b>82,865</b>       |
| - as % of all graduates                                         |                                    | 81.1%               | 81.1%                | 79.4%                     |                | 82.1%               | 81.2%                     |                | 81.5%               |
| <b>Not Found in UNC or NCCCS or UI Wage data<sup>4</sup></b>    |                                    | <b>18,366</b>       | <b>18,381</b>        | <b>20,021</b>             |                | <b>17,848</b>       | <b>18,664</b>             |                | <b>18,791</b>       |
| - as % of all graduates                                         |                                    | 18.9%               | 18.9%                | 20.6%                     |                | 17.9%               | 18.8%                     |                | 18.5%               |

Source: LEAD analysis of data from the NC SchoolWorks System (DPI, UNC, and Employment data) and the Common Follow-up System (NCCCS data), 04/17/2019

1. Graduate cohort includes all students graduating in a given year even though some graduates may have not been enrolled in the same given year.
2. NCCCS enrollment data will differ from this analysis after the completion of NCCCS UID enhancement project. The data reflects student enrollment in curriculum programs including Applied Sciences, College Transfer, and General Education programs.
3. Employment status is based on the Unemployment Insurance (UI) wage data and is not available for individuals who work outside of North Carolina; are employed in North Carolina but not covered by North Carolina's unemployment insurance laws (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers); are enrolled in the military; or are employed by the federal government.
4. Those not found in UNC or NCCCS or UI wage data may be enrolled in continuing education or other non-curriculum programs at NCCCS, in-state private institutions or out-of-state institutions or employed in establishments not covered by North Carolina UI laws including federal employment, military, and out of state establishments.

**Figure 2. Education and Employment Outcomes of 2013-2014 Public High School Graduates**



1. Includes seniors who were enrolled in 2013-2014 but have not graduated in that year. Some of them may have graduated in the later years.
2. Graduate cohort includes all students graduating in a given year even though some graduates may have not been enrolled in the same given year.
3. NCCCS enrollment data may differ from this analysis after the completion of NCCCS' UID enhancement project. The data reflects student enrollment in curriculum programs including Applied Sciences, College Transfer, and General Education programs.
4. Employment status is based on the Unemployment Insurance (UI) wage data and is not available for individuals who work outside of North Carolina; are employed in North Carolina but not covered by North Carolina's unemployment insurance laws (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers); are enrolled in the military; or are employed by the federal government.
5. Those not found in UNC or NCCCS or UI wage data may be enrolled in continuing education or other non-curriculum programs at NCCCS, in-state private institutions or out-of-state institutions or employed in establishments not covered by North Carolina UI laws including federal employment, military, and out of state establishments.