NC DEPARTMENT
of **COMMERCE**
LABOR & ECONOMIC ANALYSIS

C F S
NORTH CAROLINA
COMMON FOLLOW-UP SYSTEM

A Report on the Operations of the North Carolina **COMMON FOLLOW-UP SYSTEM**

May 2023

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THE NORTH CAROLINA COMMON FOLLOW-UP SYSTEM
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The 2023 Common Follow-up System (CFS) Operational Report provides information on CFS activities over the past calendar year. This report includes information related to education, employment and training programs for which data were reported by state agencies under the requirements of the North Carolina General Statute Chapter 96 Article 4.

WHAT IS THE COMMON FOLLOW-UP SYSTEM?

The Common Follow-up System provides information on the educational and employment outcomes of participants in publicly supported educational, employment, and training programs. CFS grew out of the recognition by a group of state agencies that quality outcome information was needed on the participants for program planning, evaluation, and resource management.

Although prior to the CFS each of the agencies conducted independent follow-up studies to fulfill specific programmatic, regulatory, or other requirements, information content and collection procedures were specific to each agency. Existing collection methods were often expensive and without a mechanism to share information among agencies, review outcomes across programs and agencies, study the relationships among programs and agencies, or examine results for the system as a whole. In short, there was no consistent encompassing method to examine North Carolina's education, employment, and training community. CFS was developed as a cost-effective response to these limitations.

HISTORY OF THE COMMON FOLLOW-UP SYSTEM

The CFS was developed in 1992 as a cooperative venture of the participating agencies under the auspices of the North Carolina State Occupational Information Coordinating Committee (NCSOICC). The participating agencies chose the former Employment Security Commission (ESC) as the system operator, due to its expertise with large data sets and its responsibility for the unemployment insurance wage file. In the initial year, a prototype matching system was developed. This matching system provided a mechanism whereby data submitted by an individual participating agency were matched to data submitted by each of the other agencies and to employment and wage information in the Unemployment Insurance wage file.

Over the first few years of operation, the CFS evolved in data processing procedures and system expansion and was converted from a single year matching system to a longitudinal database. The longitudinal database structure provided a mechanism for following an individual's progress across education, employment and training programs across time as well as supporting comparisons at specific intervals or points in time. This conversion also provided the opportunity to study the long-term impact of programs, to examine the interrelationships among agencies in the overall provision of services, and to gain a better understanding of the path individuals follow while utilizing these services. The number of individuals

processed per year increased from 330,045 in 1992 to over 1.7 million in 1995, while the number of agencies grew from six to eight over the same period.

In 1995, the General Assembly enacted legislation that amended Chapter 96 of the North Carolina General Statutes and established CFS by statue. The legislation defined system participation, established, and assigned operational and evaluative responsibilities, mandated data integrity and confidentiality, and outlined reporting requirements and schedules.

Over the next several years, there was increased interest in the data contained in the CFS. The Workforce Investment Act (WIA) of 1998 stimulated further interest and attention to the CFS data. WIA mandated the collection, calculation and reporting of performance and accountability measures for workforce training programs operated throughout the state. The ESC worked in collaboration with the Division of Workforce Development (DWD) on the development of procedures for the processing, calculation, and reporting of the state's WIA performance measures. To help meet the reporting requirements for WIA, additional data elements were added to the CFS in the calculation of performance measures.

During the 2001 Legislative Session, the General Assembly transferred the evaluative responsibility for the CFS from the Office of State Budget and Management (OSBM) to the ESC. In July of 2011, the General Assembly enacted legislation that transferred the ESC to the North Carolina Department of Commerce (NC Commerce). Responsibility for the CFS was moved to the NC Commerce's Labor and Economic Analysis Division (LEAD).

In 2012, the General Assembly enacted Session Law 2012-131 to reform the state's workforce development system. Part of the law called for NC Commerce to improve and strengthen the CFS and to collaborate with the Commission on Workforce Development to utilize information from CFS to create performance measures for the state's workforce development system. To improve and strengthen the CFS, NC Commerce began several initiatives to enhance technology for the system and update documentation for agency and programmatic information. CFS was migrated from its mainframe computing environment to a server-based platform to improve system capacity.

The North Carolina Department of Public Instruction was awarded a grant from the U.S. Department of Education in 2012 to build a State Longitudinal Data System (SLDS). The goal of the system was to provide a mechanism to follow individuals across North Carolina's K-12 education system, higher education, and into the workforce. The SLDS project was able to establish a link between the system and the employment-related data in CFS, which was completed through a joint effort between NC Commerce and the NC Department of Information Technology's Government Data Analytics Center (GDAC).

As part of its ongoing efforts to improve CFS, NC Commerce applied for and received a competitive grant in 2013 with the U.S. Department of Labor's Employment and Training Administration (USDOLETA) through the Workforce Data Quality Initiative (WDQI) program. The grant was used to enhance the CFS technology capabilities and to fund the development of the North Carolina Tool for Online Workforce and Education Reporting (NC TOWER) [1] . NC TOWER is a public online reporting system that provides

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[1] https://tower.nc.gov

employment and wage outcomes by program, degree, and institution for North Carolina's public higher education systems.

To enhance the CFS system outputs, LEAD staff worked with the Division of Workforce Solutions and the NCWorks Commission to develop a set of performance measures for the state's Workforce Development System. These measures were used in the Commission's first report "Measuring the Performance of North Carolina's Workforce Development System: A First Look" in 2014, and the subsequent annual reports. The most recent report was prepared in December 2022 and released in January 2023.

During the 2014 Session, the General Assembly enacted Session Law 2014-100 which required NC Commerce to develop a plan for the transfer of the of the CFS information and technology to GDAC. NC Commerce worked closely with GDAC to develop the business and system requirements for the new system. In 2015, LEAD and GDAC migrated the historical CFS data from its mainframe computing environment into the GDAC server-based environment. This included the migration of over 100 gigabytes of data as well as an inventory and classification of all historical data files and elements.

Beginning with the 2015 program year and continuing today, contributor data submissions and processing have been completed in the GDAC environment. During the following years, LEAD staff continued to work with GDAC and the contributing agencies to enhance the CFS content and infrastructure as well as make improvements to the contributor data portal.

HOW IS THE COMMON FOLLOW-UP SYSTEM OPERATED?

The participating agencies supply data files based on their operational and reporting periods, which can be a calendar quarter, federal fiscal year, state fiscal year, academic term, or school year. The enhanced CFS is designed to receive and align information across varying reporting schedules. The number of submitted data files and corresponding file structures are customized for each agency and are aligned to contributing agency's existing information systems. The submitted files are created from administrative records that are maintained by each of the contributors and contain a wealth of information specific to each contributor, including demographic data, program enrollment information, program completion, course participation, services received, and other agency-specific information.

HOW ARE CFS DATA PROCESSED?

Each contributing agency has defined reporting timelines customized to their specific program and agency operations. These reporting timelines are developed in collaboration with the contributing agencies and are catalogued in the GDAC contributor portal. The enhanced CFS provides an automated email notification to each contributor with a reminder of their reporting deadlines. In addition, LEAD works closely with the contributing agencies to track reporting timelines and to identify any reporting delays. The contributing agencies transmit their data files to the secure GDAC environment. Once received, information is subject to an automated data validation process. The validation process generates Edit Reports for each submitted data file and the reports are available to the contributing agencies through the GDAC Contributor Portal. Contributors review the edit reports and consult with staff at LEAD to determine if updates or corrections are needed. Agencies are responsible for reviewing and approving

their final data submissions. Once approved the data are loaded to individual contributor warehouses in the GDAC environment.

In addition to the information supplied by the education, employment and training agencies, NC Commerce's Division of Employment Security (DES) provides employment and wage information as well as information on Unemployment Insurance claims and benefit recipients. These data are processed monthly and quarterly and loaded to specific tables within the GDAC environment. At the beginning of the COVID-19 pandemic, DES started to provide more timely weekly UI claims data to the CFS.

Following the completion of the data loading process, LEAD analyzes data from contributing agencies in conjunction with employment and wage data. The resulting information are utilized in the development and production of reports, data files and other related research products.

The confidential nature of information contained in the CFS mandates the use of strict safeguards in the collection, storage, and use of the data. CFS data are stored within the secure GDAC environment. Access to the systems requires individual user data access profiles, as well as individual user ID's and passwords. At the time of system enrollment and with every data release, contributors and staff are informed of the confidential nature of the data and the legal restrictions on its use. All informational products are subject to a set of data suppression procedures to prevent the disclosure of personally identifiable information.

IS THE CFS COST-EFFECTIVE?

The CFS is an efficient and cost-effective method for collecting longitudinal outcomes for education, employment, and training program participants. The extensive use of administrative records and automated matching systems allows the costs to be held below that of any system that would rely upon phone or mail surveys to collect similar data.

The cost-effectiveness of the CFS can also be evaluated in terms of the benefit that the data provide to the participating entities. The system generates matching employment and wage data for participants without the use of telephone or mail surveys. Benefits include time saved not having to produce mail and analyze responses from program participants, making the return on investment invaluable.

Several of the contributing agencies have utilized the information available through CFS to help meet a variety of state and federal performance, policy, and evaluation initiatives. The North Carolina Community College System (NCCCS) has utilized the information to help in meeting federal performance requirements for the U.S. Department of Education including the National Reporting System for Adult Education programs and the Perkins IV core indicators. In addition, they utilized data from CFS in the development of a performance measures system for North Carolina's 58 Community Colleges including an employment measure that will be utilized to assess post-completion employment outcomes.

The University of North Carolina System (UNC) has utilized information through CFS to support internal analyses, assist in strategic planning and provide employment-related information to the UNC Board of

Governors in its program review process. The UNC dashboard[2] contains a variety of enrollment and graduation statistics including a link to the employment and wage outcomes in the NC TOWER web portal.

In addition, information from the CFS is utilized by agency partners in meeting state and federal performance and evaluation initiatives. These efforts have included the use of CFS data in assessing the provision of services to participants as well as the evaluation of employment and wage outcomes. CFS data is often utilized to support economic development activities in the state and assist stakeholders to make informed decisions for business recruitment and expansion. Career development programs across the state in both higher education and high schools also use the data.

WHAT ARE THE STRENGTHS AND LIMITATIONS OF CFS DATA?

The scope of the CFS is extensive in terms of the number of contributing entities, the number of individuals included in the system and the breadth of program and service coverage. Review of follow-up systems in other states reveals that North Carolina's CFS offers the most comprehensive coverage of education and workforce program participant outcomes of any state longitudinal data system. Many states and governmental entities with similar missions and mandates view the CFS as a model for delivering follow-up information. The CFS is an efficient and cost-effective tool for long-term follow-up due to the reliance on automated matching of administrative records. However, since much of the data utilized in the CFS were originally gathered for different purposes, the resultant output possesses both inherent strengths and limitations. Several of the most significant areas are described below:

Wage information includes information on individuals:
- **working in jobs covered under North Carolina Unemployment Insurance Laws**

Available employment-related data includes:
- **employment status of the individual**
- **size of the employing firm**
- **North American Industry Classification System (NAICS) code of the firm.**

Wage information reflects total quarterly earnings; hourly or weekly wages are not available.

Wage information is not available for individuals who:
- **work outside of North Carolina**
- **are employed in North Carolina, but not covered by unemployment insurance (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers)**

Employment-related information that cannot be determined includes:
- **entry-on-duty date of employment for the individual**
- **employment type (i.e., permanent, temporary, part- or full-time)**
- **whether the person worked at all during the quarter**
- **number of hours worked for the quarter**
- **person's occupation.**

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[2] https://www.northcarolina.edu/impact/stats-data-reports/

CFS CURRENT OPERATION (2022)

Improving the Quality of Workforce and Education Data

During the 2022 calendar year, the Labor and Economic Analysis Division (LEAD) worked closely with GDAC to undertake further enhancements to improve contributors' experience in data processing and submission process as well as system reporting in a visual analytic platform.

In a continued effort to improve data quality, enhance analysis and increase analytical accuracy, LEAD and GDAC staff worked on the Enterprise Entity Resolution (EER)[3] project. Analysts from the project team have successfully completed rigorous testing and implementing of the EER effort by developing a crosswalk table to identify individual participants across data sources and from different programs. As of March 2022, the Enterprise Entity Resolution project is completed and fully functional; its outputs are already used in various projects and data requests. For example, EER algorithms allowed to resolve more than 250 thousand (10% of the overall population) Social Security Numbers for the NC DPI high school student data stored in the CFS for the period between 1991 and 2022. For some agencies that do not collect Social Security Numbers, such as Division of Aging and Adult Services (DAAS), Entity Resolution remains the only way to resolve SSN's and link individuals' records across datasets. In particular, for the DAAS, the resolution rate reaches 91%.

Responding to data requests

The system's well-functioning infrastructure and diverse range of data sources enable CFS to address a multitude of internal and external data requests. During the report year, LEAD staff provided data and analytic support to the economic, workforce, and education partners, including the UNC System; NC Community College System, Department of Public Instruction; Wake County Public School System; myFutureNC; the Hunt Institute; NC Southeast Region; NC Global TransPark; Eastern Carolina Workforce Development Board; NC Office of Science, Technology & Innovation; and the U.S. Department of Education's Office of Career, Technical, and Adult Education.

Utilizing CFS to Carry Out Analysis of Workforce and Education Programs

While most of the enhancements in the CFS are operational, LEAD continues to seek additional resources to carry out several initiatives to further improve the quality of CFS data-matching capabilities and facilitate the delivery of information on the effectiveness of education and workforce programs. To acquire additional resources, LEAD has applied for and received a second competitive grant with the USDOL/ETA through the Workforce Data Quality Initiative (WDQI) Round VII program with three-year grant period from July 2019 to June 2022. As part of the WDQI project deliverables, LEAD increased focus on program evaluation and data stories to help education and workforce agencies, state leadership, and the general public to improve data-informed decision-making in North Carolina's workforce system.

In particular, LEAD analysts carried out a study assessing the impact of post-prison employment on recidivism with findings summarized in a research paper[4] and blog article[5]. The findings are valuable to support the work by the state's reentry employment professionals, as well as the criminal justice and

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[3] Recently the project has also been referred to as "NC eLink"
[4] https://tools.nccareers.org/CFS/reports/Impact_of_post_release_employment_on_recidivism_2022.01.14.pdf
[5] https://www.nccommerce.com/blog/2022/01/14/paycheck-pathway-out-prison-new-findings-north-carolina

workforce systems more broadly. The study was published in January 2022, and research results and related information were disseminated at the following events:

- A virtual meeting of the North Carolina State Reentry Council Collaborative (February 2022);
- A virtual meeting of the LEAD Research Roundtable (February 2022);
- A virtual meeting of North Carolina governor's office staff and agency leadership (March 2022);
- The North Carolina Reentry Conference in Greensboro, NC (April 2022);
- A virtual meeting of the Wake Reentry Council and Capital Area Workforce Development board (April 2022);
- A virtual meeting of Iowa reentry professionals (May 2022);
- The 62nd Annual C2ER/LMI Institute Conference in Columbus, OH (June 2022).

Data stored in the CFS provides a unique opportunity to better understand the impact of COVID-19 on North Carolina's labor market. During the report period, LEAD researchers carried out and published on the CFS website[6] multiple studies that focus on the effect of pandemic on particular occupations and social groups:

- "Wage Growth and Wage Inequality in North Carolina" [7]
- "Most Workers Who Lost Their Job During the COVID-19 Recession in North Carolina Were Quickly Re-Employed" [8]
- "Low-Wage Workers and the K-Shaped Recovery in North Carolina" [9]
- "What Happened to North Carolina's Restaurant Workers After the COVID-19 Recession?" [10]
- "The Workforce Challenge in North Carolina's Public and Private Schools During the COVID-19 Pandemic" [11]
- "The Workforce Behind the Workforce: North Carolina's Childcare Service Industry Throughout the Pandemic" [12]
- "Recession Scarring for College Graduates Entering the Labor Market During a Downturn" [13]

All these analyses have been undertaken in collaboration with the CFS partners including the UNC System, the NC Community College System, NC Department of Public Instruction, and NC DHHS Division of Vocational Rehabilitation Services. While LEAD has provided the analytical capacity, the partner agencies have developed a deep understanding of the outcomes of their programs and populations served.

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[6] https://nccareers.org/cfs/
[7] https://www.commerce.nc.gov/blog/2022/09/13/wage-growth-and-wage-inequality-north-carolina
[8] https://www.commerce.nc.gov/blog/2022/08/09/most-workers-who-lost-their-job-during-covid-19-recession-north-carolina-were-quickly-re-employed
[9] https://www.commerce.nc.gov/blog/2022/08/30/low-wage-workers-and-k-shaped-recovery-north-carolina
[10] https://www.commerce.nc.gov/blog/2022/09/23/what-happened-north-carolinas-restaurant-workers-after-covid-19-recession
[11] https://www.commerce.nc.gov/blog/2022/12/19/workforce-challenge-north-carolinas-public-and-private-schools-during-covid-19-pandemic
[12] https://www.commerce.nc.gov/blog/2022/12/15/workforce-behind-workforce-north-carolinas-childcare-service-industry-throughout-pandemic
[13] https://www.commerce.nc.gov/blog/2022/09/29/recession-scarring-college-graduates-entering-labor-market-during-downturn

Further research, analytical and reporting efforts included support to the Governor's Education Cabinet, continued collaboration with myFutureNC and The Hunt Institute as well as the delivery of several presentations at state and national meetings. LEAD staff integrated information from the CFS in presentations related to education, workforce development, and the economy. These informative sessions included presentations at various stakeholder meetings: NCWorks Partnership Conference, NCWorks Commission meetings; State Board of Community Colleges, State Reentry Council Collaborative meeting; and Council for Community and Economic Research conference.

Producing and Disseminating Workforce and Education Performance Information and Outcomes

During the report period, LEAD staff successfully completed work on enhancing and expanding the North Carolina Tool for Online Workforce and Education Reporting (NC TOWER)[14]. NC TOWER is a web-based delivery tool using information from the CFS to information on employment and wage outcomes and higher education enrollment for more than 1.2 million students who graduated from schools in the North Carolina Community College System and the University of North Carolina System over nearly two decades. Information in NC TOWER can be viewed at an aggregate level - such as outcomes for all bachelor's degree earners in North Carolina, regardless of where they went to school or what they studied. It can also be broken out by degree or credential type (Bachelor's, Master's, Associate, Certificate, etc.), subject areas (Curriculum Program or CIP codes), and individual public institutions. Employment and wage information can also be categorized by the industry sector of the student's employment. The enhancement included migrating NC TOWER to a new platform, introducing new functionality and visualizations, adding new demographic elements, and improving suppression algorithms.

In partnership with the NC Department of Public Instruction with funding support from the WDQI grant, LEAD has expanded NC TOWER by adding secondary education data, which was successfully accomplished in February 2023. NC TOWER now includes data to explore workforce and education outcomes for all NC public high school graduates by school district, demographic characteristics, CTE status and program. LEAD also provided support to various webinars to introduce these new features to DPI staff.

During the report year, LEAD continued to provide updates to the Workforce Service Delivery Outcome Dashboard[15] that was developed in collaboration with the Division of Workforce Solutions (DWS), the Local Workforce Development Boards (WDB), and the NC Association of Workforce Development Boards. The dashboard utilizes data provided to the CFS by DWS to report the number of participants served and services provided by each WDB. It includes outcome measures such as post-program participation employment and wage information.

In addition, LEAD staff continued updating and enhancing the NC Labor Supply and Demand dashboard[16]. Data in the CFS is utilized to support the dashboard, including the number of students graduating and obtaining post-secondary credentials from the NC Community College System and the UNC System.

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[14] https://tower.nc.gov
[15] https://analytics.nccommerce.com/NC-WDB-Services/
[16] https://analytics.nccommerce.com/NC-Labor-Supply-Demand/

Enhanced System Outputs

Responding to the critical data need and support for work related to unemployment situation at the state and local levels, LEAD continued to monitor and report on UI claims by providing timely updates to the NC Monthly UI Claims Data Dashboard[17] and the NC Weekly UI Claims Data Dashboard[18] using data from the CFS. Both dashboards provide information on demographic characteristics, industries of employment, and types of unemployment assistance for claimants across all 100 counties and 23 workforce development board areas in the state. This information is utilized by various state agencies for monitoring the state and local economy.

LEAD has also continued updating the NC UI Claimant Map Application[19] to provide information to the Division of Workforce Solutions (DWS) and to the Local Workforce Development Boards (WDB) regarding the number of active UI claimants within the local NCWorks Career Center service areas. This information is critical in helping DWS and the local WDBs for the planning of Career Center operations.

Strategic Partnership Activities

LEAD continued to be an important partner in the North Carolina State Longitudinal Data System (NCLDS), which represents a recent collaborative initiative among three cornerstone segments of the education-workforce system:

- Early Childhood Integrated Data System (ECIDS) — designed to provide integrated early childhood education, health, and social service data from participating agencies. This system is administered by North Carolina Division of Health and Human Services;
- North Carolina School Works (NCSW) — a federated system that links data from early learning to workforce. This system is administered by the NC Department of Public Instruction and is a collaborative effort with various entities including the NCCCS, the UNC System, the NC Independent Colleges and Universities, and the NC Department of Commerce;
- The Common Follow-Up System (CFS) — a repository of workforce and education data which is administered by the NC Department of Commerce's Labor and Economic Analysis Division.

This initiative is to build a roadmap to modernize the NCLDS and provide policymakers and education/workforce stakeholders with access to timely and actionable information for use in policy and business decisions. Design of the system and coordination of all functions among all entities are carried out in cooperation with the North Carolina Education Cabinet while technical and operational support is provided by GDAC.

PARTICIPATION SUMMARY ACROSS THE YEARS

Since its inception, the CFS has experienced tremendous growth. LEAD and the contributing agencies have made concerted efforts to incorporate information regarding additional programs and the individuals they serve, as well as to solicit the participation of other divisions or agencies. The analyses that are included

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[17] https://analytics.nccommerce.com/NC-UI-Claims-Monthly/
[18] https://analytics.nccommerce.com/NC-UI-Claims-Weekly/
[19] https://analytics.nccommerce.com/NC-Career-Centers-Map/

in the following sections reflect data supplied by the contributing entities for services that were provided through June 2021.

CFS has expanded dramatically since it started in the early 1990's. Figure 1 shows the total number of unique individuals included in the system between the 1994-1995 and 2020-2021 program years[20], as well as the number of individuals served each year by publicly funded education and workforce training programs contained in CFS. The system currently includes information on over 10 million unique individuals.

The total number of unique individuals within the CFS was obtained by performing a total unique count of all validated Social Security Numbers contained in the system across all contributing agencies by program year. Analyses of data indicate that the number of individuals who received services through one or more of the contributing entities ranged from the high of 2.3 million in program year 2010-2011 to 1.8 million in the most recent 2021-2022 program year.

Figure 1. Growth and Scope of the Common Follow-up System Since Inception, 1995 to 2022

Source: Common Follow-up System, Labor & Economic Analysis Division, NC Department of Commerce, 2023
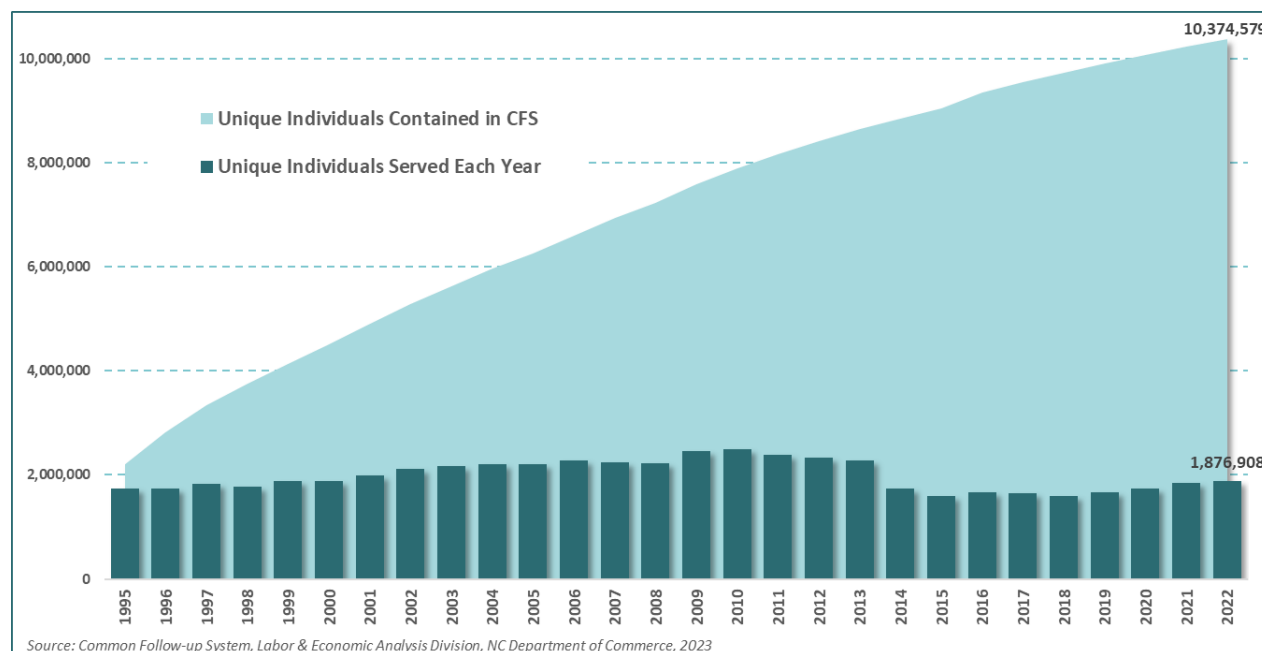
The following entities provided information on individuals enrolled in education and training programs during the 2021-2022 program year:

- **North Carolina Department of Public Safety**
  - **Division of Adult Correction (DAC)**
- **North Carolina Department of Public Instruction (DPI)**
- **North Carolina Department of Commerce**
  - **Division of Workforce Solutions (DWS)**
- **North Carolina Department of Health and Human Services**

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[20] Program year runs from July 1 through June 30.

- o **Division of Services for the Blind (DSB)**
- o **Division of Social Services (DSS)**
- o **Division of Vocational Rehabilitation Services (DVRS)**
- o **Division of Mental Health, Developmental Disability, and Substance Abuse (DMH)**
- o **Division of Aging and Adult Services (DAAS)**

- **North Carolina Community College System (NCCCS)**

- **University of North Carolina (UNC)**

In addition to the information supplied by the education, employment and training agencies, the DES provided CFS a wealth of employment and wage information as well as information on Unemployment Insurance claims and benefit recipients.

Analyses of agency's historical data in CFS provide an understanding of the scope of the system, as well as an overview of service provision by contributing agencies over time. Table 1 presents information regarding the number of individuals served by each of the contributing agencies by year as well as the total number of individuals served across all contributing agencies. Counts of the number of individuals by each agency were obtained by performing a unique count of individuals with SSNs submitted by the agency by program year. The agency totals across the ten-year time period are counts of unique individuals across multiple years. Individuals can receive services from a given agency across multiple program years. The unique count of individuals across all agencies within a given year are unique counts of individuals across agencies. Individuals may be served by more than one agency in a given year or across years.

TABLE 1. Individuals Served by Agency and by Program Year

Agency	Program Year										Individuals served per agency, 2013-2022
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	
NC Division of Aging and Adult Services	--	--	--	321	341	313	316	249	185	234	790
NC Division of Mental Health, Developmental Disability, and Substance Abuse	--	--	--	6,405	6,897	8,021	7,819	7,648	6,235	5,915	18,106
NC Division of Adult Correction	183,614	191,292	183,066	195,066	190,351	187,128	183,040	168,017	153,869	146,880	511,764
NC Department of Public Instruction	240,739	183,636	201,036	344,866	328,286	309,857	281,660	237,452	200,405	156,643	884,042
NC Division of Services for the Blind	3,737	3,656	3,213	3,249	3,166	2,856	2,983	2,970	2,410	2,483	9,186
NC Division of Social Services	345,551	291,355	18,568	24,038	49,213	12,362	15,449	14,448	11,920	10,458	619,295
NC Division of Vocational Rehabilitation Services	60,105	57,854	48,642	57,370	51,336	47,404	45,981	40,917	34,542	32,614	174,006
NC Division of Workforce Solutions	986,408	422,222	469,488	420,567	404,558	428,083	541,213	721,640	920,644	995,911	2,419,788
NC Community College System	745,106	697,018	659,747	621,253	602,901	580,102	566,795	515,862	473,416	483,853	2,642,940
University of North Carolina System	236,332	233,399	233,382	239,038	240,696	243,269	246,644	249,297	253,310	251,233	845,224
Individuals served per program year across all agencies	2,281,802	1,733,208	1,590,022	1,671,405	1,639,487	1,599,262	1,659,741	1,728,338	1,841,624	1,876,908	5,218,794

Over the ten-year period spanning July 1, 2012 through June 30, 2022, over 5.2 million individuals received services through the contributing agencies. This includes 2.4 million individuals who received a variety of workforce services through the DWS which is the state administrative entity for the Workforce Innovation and Opportunity Act (WIOA) Title I and Title III programs. Over 2.6 million individuals participated in education and training programs through the NCCCS, which is responsible for administering WIOA Title II programs. While DWS and NCCCS delivered services to large numbers of individuals, North Carolina's public school system provides the building blocks upon which other education, employment and training services rely. During the same period, more than 884,000 individuals were enrolled in public high school programs. UNC is the state's publicly supported university system and provides educational programs to over 845,000 individuals.

Several agencies provide services to very specific sub-populations. The Division of Social Services provided employment and supportive services to more than 619,000 Work First and Food Stamp Employment and Training Program participants over the ten-year time period, while the Department of Public Safety provided services to over 511,000 offenders in prison, or on probation or parole. The Division of Vocational Rehabilitation Services provided rehabilitation services to over 174,000 individuals with physical and mental disabilities, and Division of Services for the Blind provided vocational rehabilitation services to more than 9,000 blind, visually impaired and multi-handicapped individuals.

It is important to keep in mind that some entities are authorized to provide services to large segments of the population (e.g., DWS and NCCCS), while others are authorized to provide services to very specific sub-populations based on stringent eligibility criteria including occupational goal, income, disability type, severity of disability, and educational requirements (e.g., DSS, DVR, DSB and UNC).

INTERRELATIONSHIPS AMONG AGENCIES IN THE PROVISION OF SERVICES

A significant feature of the CFS is its longitudinal structure, which fosters the examination of the interrelationships among entities in the overall provision of services and an understanding of the path individuals follow while utilizing these services. Several initiatives at both the State and National level have called for the coordination, collaboration, and integration of services to individuals across education, employment, and training programs. These initiatives include the NCWorks Career Center System, Workforce Investment Act, Workforce Innovation and Opportunity Act, as well as endeavors by the education, employment, and training agencies themselves.

To provide an understanding of the interrelationships among entities in the provision of services, data were analyzed both within and across the last ten program years (July 1, 2012 through June 30, 2022). These analyses utilized data from each of the contributing agencies. These agencies vary in terms of their organizational structure. That is, some of the agencies encompass several divisions within a given agency, others encompass a single division within a given agency and others encompass the combined work of staff across multiple agencies and programs. The data provided by each of these agencies includes information regarding one or more programs and/or services.

Analyses focused on determining the unique number of individuals who received services through each agency, the unique number of individuals who received services across agencies and the number of

individuals found in common among the agencies. Graphs with the results of the analysis are provided in Figure 2.

Figure 2. Total Unique Individuals Served by Each Agency and Number of Individuals Also Served by One or More of Other Agencies Program Years: 2011 - 2012 through 2021 - 2022

NC Division of Adult Correction — Total Served 511,764; NCCCS 205,374; DPI 29,589; DSB 676; DVR 30,926; DSS 124,692; DWS 255,979; UNC 10,738
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Department of Public Instruction — Total Served 884,042; NCCCS 435,801; DOC 29,589; DSB 637; DVR 34,858; DSS 19,193; DWS 152,299; UNC 247,868
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Division of Services for the Blind — Total Served 9,186; NCCCS 2,547; DOC 676; DPI 637; DVR 676; DSS 1,486; DWS 4,027; UNC 503
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Division of Vocational Rehabilitation Services — Total Served 174,006; NCCCS 76,471; DOC 30,926; DPI 34,858; DSB 676; DSS 39,445; DWS 88,614; UNC 6,045
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Division of Social Services — Total Served 619,295; NCCCS 239,069; DOC 124,692; DPI 19,193; DSB 1,486; DVR 39,445; DWS 372,538; UNC 19,254
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Division of Workforce Solutions — Total Served 2,419,788; NCCCS 929,262; DOC 255,979; DPI 152,299; DSB 4,027; DVR 88,614; DSS 372,538; UNC 142,787
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

NC Community College System — Total Served 2,642,940; DOC 205,374; DPI 435,801; DSB 2,547; DVR 76,471; DSS 239,069; DWS 929,262; UNC 368,611
Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report

University of North Carolina System — Total Served 845,224; NCCCS 368,611; DOC 10,738; DPI 247,868; DSB 503; DVR 6,045; DSS 19,254; DWS 142,787
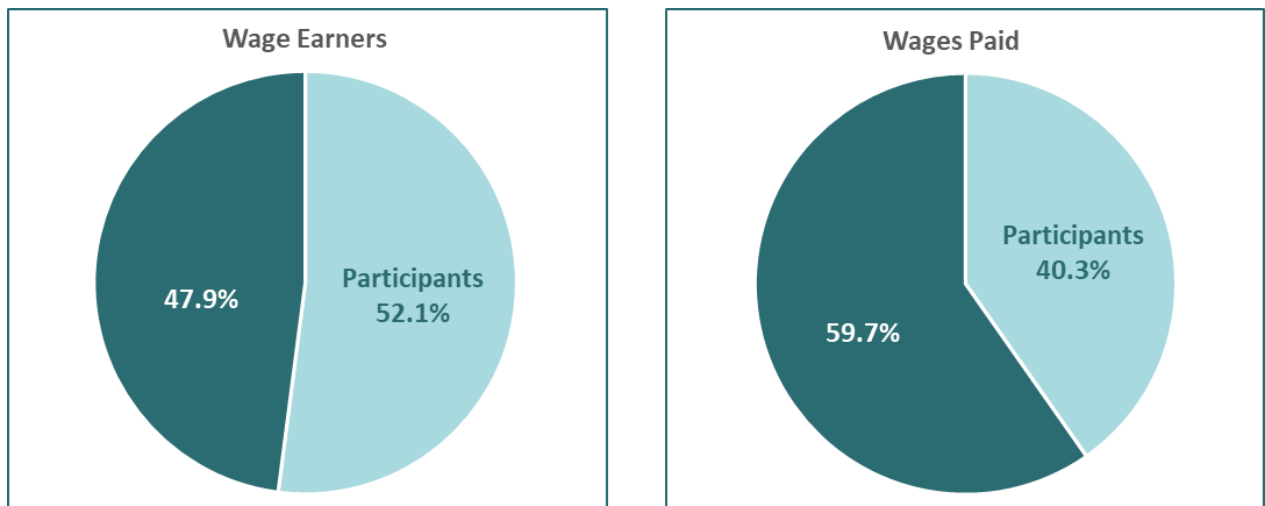*Labor & Economic Analysis Division, NC Department of Commerce, CFS 2023 Report*

RELATIONSHIP OF INDIVIDUALS SERVED TO THE NORTH CAROLINA ECONOMY

In addition to providing information regarding the number of participants served by each agency, CFS may also be utilized to provide an understanding of the relationship between participants of the state's education, employment, and training programs and the overall economy.

During the 2021-2022 program year, there were over 5.5 million unique individuals that were working in jobs covered by North Carolina's unemployment insurance laws with their wages reported to the DES and these individuals earned over $279.7 billion in total wages. Of these over 5.5 million wage earners, approximately 2.88 million (or 52.1%) participated in education, employment, and training programs through one of the participating agencies during the ten-year period from July 1, 2012 to June 30, 2021 and they earned $112.6 billion in total wages or 40.3% of all wages reported to the DES in 2021-2022.
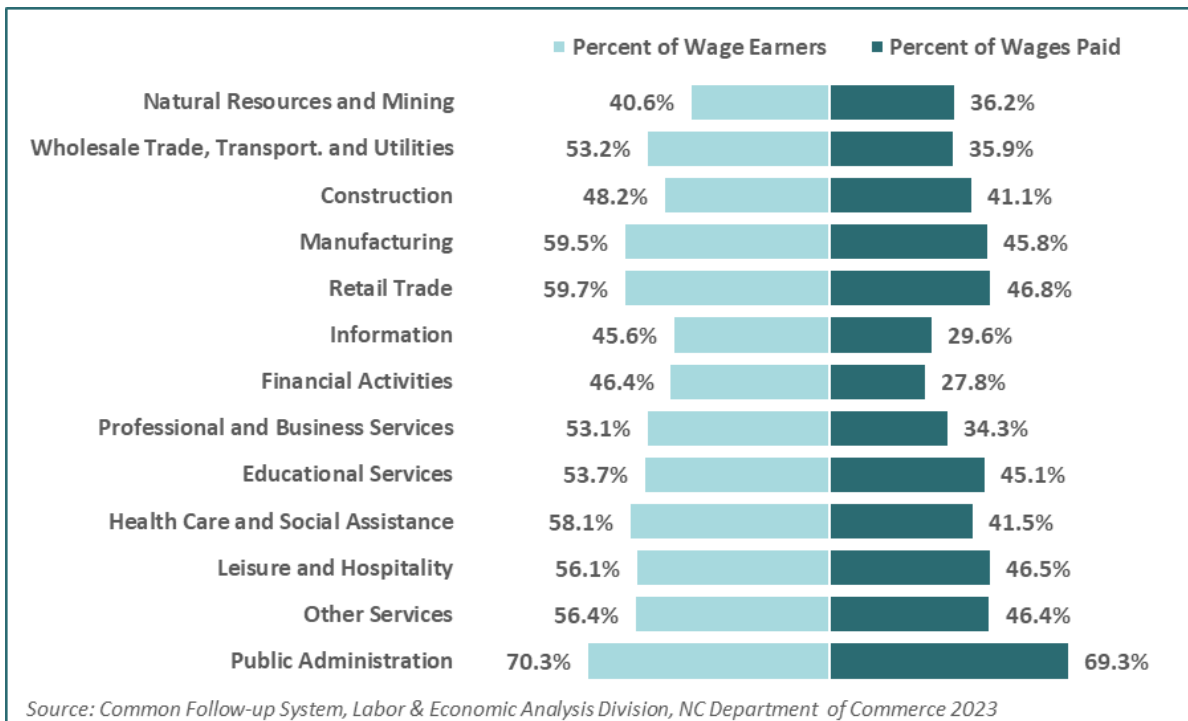
Figure 3. Ratio of Participants of North Carolina's Education, Employment and Training Programs (July 1, 2012 – June 30, 2021) to All Wage Earners and Wages Paid During the 2021-2022 Program Year

Source: Common Follow-up System, Labor & Economic Analysis Division, NC Department of Commerce 2023

Further analyses by industry sector demonstrate that vast majority of individuals employed in most of the state's major industry sectors participated in programs and services provided by one of the participating agencies in the last ten years (Figure 4). More than half of individuals employed in the following major industry sectors have been participants of the contributing agencies in the last ten years: Wholesale Trade, Transport, and Utilities (53.2%), Manufacturing (59.5%), Retail Trade (59.7%), Professional and Business Services (53.1%), Educational Services (53.7%), Health Care (58.1%), Leisure and Hospitality (56.1%), Public Administration (70.3%), and Other Services (56.4%).

Figure 4. Ratio of Participants of North Carolina's Education, Employment and Training Programs (July 1, 2012 – June 30, 2021) to All Wage Earners and to All Wages Paid by Industry Sector During the 2021-2022 Program Year

	Percent of Wage Earners	Percent of Wages Paid
Natural Resources and Mining	40.6%	36.2%
Wholesale Trade, Transport. and Utilities	53.2%	35.9%
Construction	48.2%	41.1%
Manufacturing	59.5%	45.8%
Retail Trade	59.7%	46.8%
Information	45.6%	29.6%
Financial Activities	46.4%	27.8%
Professional and Business Services	53.1%	34.3%
Educational Services	53.7%	45.1%
Health Care and Social Assistance	58.1%	41.5%
Leisure and Hospitality	56.1%	46.5%
Other Services	56.4%	46.4%
Public Administration	70.3%	69.3%

Source: Common Follow-up System, Labor & Economic Analysis Division, NC Department of Commerce 2023

Analyses of the wages paid in each industry revealed that at least 30% of the wages in all major industry sectors (except for Information and Financial Activities), were paid to individuals who had participated in programs and services through one of the contributing agencies in the last ten years. These results clearly indicate the connection between education, employment, and training programs and the state's economy as well as the continued need for coordination among education, workforce development and economic development efforts.
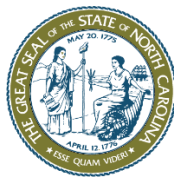
OPERATION SUMMARY

North Carolina's education, employment and training system plays a fundamental role in the overall mission of developing and promoting the highly skilled workforce, improving the quality of life for North Carolinians, and preparing the state and its communities to compete in the global economy. The Common Follow-up System is an effective mechanism for providing information regarding the agencies, programs, and participants that comprise this system. The CFS is a valuable resource for estimating the educational and employment outcomes of individuals who participate in various services, understanding of the path individuals follow while utilizing these services, and demonstrating the integral relationship that exists between the services provided by the state's education and workforce partners and the state's economy.

The CFS plays an important role helping guide state recovery from the COVID-19 crisis. Many state agencies and local entities rely on LEAD to keep them up to date on economic conditions. As North Carolina continues to recover from the pandemic, data in the CFS is critical for monitoring the economic recovery so leadership, policymakers, and agency service providers can direct resources to their most effective uses in education and workforce training programs.