

## The COVID-19 Pandemic and North Carolina Schools: A Mixed-Methods Analysis

The COVID-19 pandemic has created unprecedented challenges for young people in North Carolina and around the world; subjecting youth to health risks, emotional trauma, economic insecurity. At the same time, the pandemic disrupted schooling. Schools closed their doors in Spring 2020 and embarked on a months-long effort to provide remote education for homebound youth. These disruptions continued into the 2020-21 school year, even as schools have worked to establish new routines and bring students back into building as community conditions allowed.

Helping youth recover from the pandemic will require a clear understanding of how youth experienced the pandemic and ways their experiences varied both across and within communities. This project proposes to contribute to this collective effort by assessing the pandemic's academic consequences for North Carolina youth and identifying both challenges and sources of strength for the years ahead.

Our work will be organized around the following goals:

1. Measure the pandemic's consequences on the learning and educational engagement trajectories of youth in diverse North Carolina communities.
2. Catalog the opportunities educators made available to youth in North Carolina during the pandemic.
3. Explore the association between educational opportunities and youth learning and educational engagement in the pandemic period and beyond.

We provide more detail on our preliminary research plan around each of these goals below.

### **Goal 1: Measure the pandemic's consequences on the learning and educational engagement trajectories of youth in diverse North Carolina communities.**

In a more typical time, state-mandated end-of-grade and end-of-course tests would allow for broadly generalizable inferences about learning trajectories in North Carolina public schools. However, North Carolina public schools did not administer state-mandated tests in Spring 2020 and interruptions in state-mandated testing during the 2020-21 school undermine these tests' usefulness for understanding student achievement growth during the pandemic.

However, millions of students across the United States – including approximately 10 percent of North Carolina students in grades 3-8 – took the NWEA MAP Growth test during the pandemic. This test allows for the estimation of student math and reading skill growth over time. Early work using NWEA MAP Growth data from across the U.S. suggests that students made approximately half the learning gains in mathematics between spring and fall 2020 than they would have in a typical year. However, these data suggest that learning gains in reading during the same period were much more in line with typical gains (Kuhfeld et al. 2021).

Our project will draw upon all available NWEA MAP Growth data for students to assess North Carolina students' learning trajectories from Fall 2019 through spring 2021. We will disaggregate these data to explore the extent to which achievement trajectories vary with student gender, race/ethnicity, grade, and district and school location. The NWEA MAP Growth sample includes only students in educational organizations that opted into this test, including students in

one of the state's largest urban school districts, students in several smaller districts across the state, and students in charter and private schools.

NWEA will partner with us as we access and analyze these data. Working with NWEA, we will make data agreements with the districts and schools that administer the NWEA MAP Growth, aiming to link test score data to contextual characteristics, including measures of local COVID infection and mortality rates, school policies, labor market conditions, and residential internet availability. Further analyses will compare the NWEA MAP Growth sample with the state to assess the sample's demographic representativeness and assess the extent to which these findings generalize for North Carolina students more broadly. In addition, to allow a more holistic analysis of youth development during the pandemic, we will work with schools and districts to secure additional measures of youth academic engagement, including measures of attendance, assignment completion, and course grades.

### **Goal 2: Catalog the opportunities educators made available to youth in North Carolina during the pandemic.**

We will further work with local educational providers to collect data on the opportunities that districts, schools, and community organizations made available to youth during the pandemic.

In the Spring of 2020, the National Center for Research on Educational Access and Choice scraped the websites of all 122,309 public, private, and charter schools and districts in the United States to collect a snapshot of data on school policy and practices in response to the pandemic. These data, together with data from the North Carolina Department of Public Instruction and North Carolina's ABC Science Collaborative will serve as a starting point for cataloguing developmental opportunities across North Carolina schools during the pandemic.

We will validate and supplement these data with a closer look at the North Carolina districts and schools that administer the NWEA. For each of these public, private, and charter schools and districts, we will interview school leaders and review websites, school board meeting minutes, and newspaper articles to compile an overview of educational offerings over the 2019-20 and 2020-21. We will comprehensively catalog school schedules, learning modes (i.e. remote, in-person, and hybrid), meal provision systems, supplemental learning opportunities, family and community engagement efforts, school-based public health offerings, and socioemotional developmental opportunities. As resources allow, we will also interview district officials, school leaders, school nurses, counselors, social workers, teachers, parents, and students to shed light on the opportunities that schools provided to support youth social and emotional development.

### **Goal 3: Explore patterns of educational opportunities and youth learning and engagement in the pandemic period and beyond.**

Finally, we will bring together the data we gathered in Goals 1 and 2 to shed light on replicable strategies that educators across the state can use to in the years ahead as they help North Carolina youth recover from the pandemic.

Our approach for these mixed-methods analyses will necessarily depend on the nature of the opportunities that we document in our Goal 2 data collection. By jointly displaying Goal 1 quantitative evidence with Goal 2 qualitative evidence, we will aim to provide exploratory evidence about educational strategies that appear to have helped students – and particularly students from communities that disproportionately bore the pandemic's burdens – continue to learn and engage academically through the pandemic.

## Research Team

**Thurston Domina** is Professor of Educational Policy and Organizational Leadership at the University of North Carolina, Chapel Hill. Dr. Domina’s work focuses on the use of educational data to improve educational equity.

**Dana Griffin** is an Associate Professor at the University of North Carolina, Chapel Hill. Dr. Griffin’s work focuses on the role of school counselors in promoting educational equity through the use of school-family-community partnerships.

**Ayesha Hashim** is an Assistant Professor of Educational Policy and Leadership at the University of North Carolina, Chapel Hill. Dr. Hashim uses mixed methods to understand the implementation and outcomes of district-level school reforms focused on education technology, school choice, and human capital development.

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### Budget Summary:

EHRA Salary	\$69,759.00
SHRA Salary	\$11,000.00
Grad Student	\$9,434.00
Temps	\$0.00
Fringe Pool	\$29,492.00
Non-Personnel Expenses	\$30,315.00
<b>Total</b>	<b>\$150,000.00</b>