

Using Randomized Controlled Trials in NC to Build Evidence for Effective Policy and Practice

The [Monthly Connect](#) is a series of virtual panel discussions on topics relevant to partnerships among state government, universities/colleges and other research institutions, philanthropy, and others. Monthly Connects are open to anyone interested in attending.

SESSION AT A GLANCE

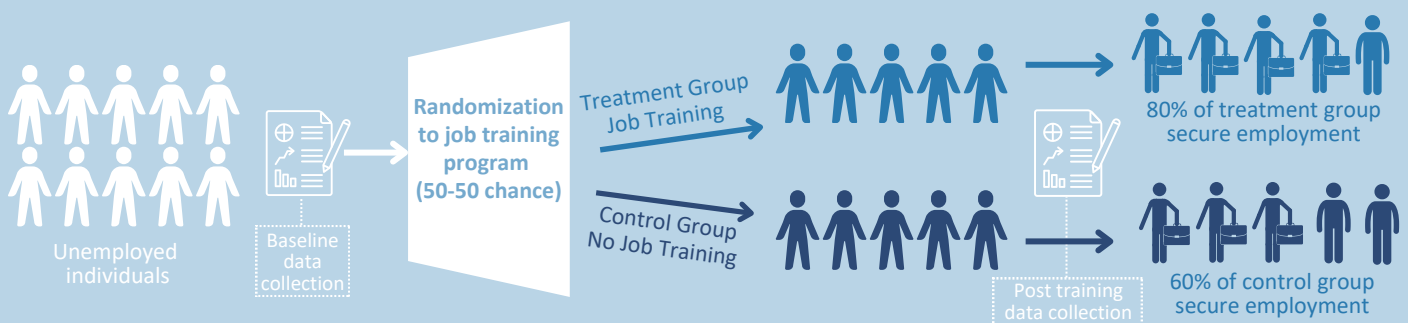
Speakers from state government, a university, and a community college shared examples of randomized controlled trials (RCTs) they have been involved with in North Carolina and the impact these trials have had. The panelists touched on how RCTs can fit into continuous improvement efforts in government, discussed potential ethical concerns about RCTs, and gave practical advice for how researchers and government officials can implement RCTs into their research agendas.

What is a Randomized Controlled Trial (RCT)?

A randomized controlled trial is a study or experiment in which there are at least two groups of randomized subjects with the same characteristics. There is always at least one experimental (or “treatment”) group that receives an intervention and a control group that does not receive an intervention. Researchers compare the treatment group’s results with the results of the control group. The randomization mitigates potential bias and unobserved characteristics that might impact observed differences in outcomes between individuals who receive an intervention or program and those who do not.

RCTs are the strongest research design for identifying the causal effects of a policy or program on an outcome of interest. They allow researchers to compare outcomes of treatment and control groups who are, on average, the same across observable and unobservable characteristics except for the program or intervention randomly assigned. RCTs are a powerful tool for evidence-based decision making in many industries including government.

The graphic below illustrates how an RCT study would work to evaluate a job training program. A cohort of unemployed individuals is randomly assigned to participate in a job training program, with half assigned to the treatment group (receive job training) and half assigned to the control group (no job training). Any differences in employment rates between the treatment and control group can be attributed to the job training program. This is because the random assignment process ensures both treatment and control groups are the same on observable and unobservable characteristics (like individual motivation) except for participation in the job training program.



HIGHLIGHTS

Examples of RCTs in NC

Summarized below are three examples of RCTs speakers on the Monthly Connect discussed and shared with participants.

- [Project COMPASS](#) (Constructing an Online Model to Promote At-Risk Student Success), is an intervention designed to improve student success in online coursework at Wake Technical Community College. The evaluation of Project COMPASS used an RCT design in which students who enrolled in targeted online courses were randomly assigned to either a section taught by an instructor trained in Project COMPASS instructional strategies or an instructor not trained in Project COMPASS instructional strategies.
- The [Early College Research Center](#) has been conducting a longitudinal research study on Early College High Schools (ECHS) for over 17 years. ECHS are an innovative model of schooling that seeks to blur the line between high school and college. Students enter in 9th grade and they are expected to graduate with the credits necessary to satisfy the requirements for an associate degree. Researchers used a random lottery to select students from the applicant pool, and students not chosen for the ECHS program attended a high school within their designated school zone. The results of the RCT showed that students in ECHS had better attendance, lower suspension rates, higher college course completion rates, higher chances of enrolling in college, and higher chances of earning a postsecondary credential.
- The [NC Department of Adult Correction](#) (NCDAC), then housed in the NC Department of Public Safety, discussed its approach for an RCT it implemented to test mobile applications and the delivery of postsecondary education to incarcerated individuals in prison to improve reentry outcomes.



*One of the most meaningful aspects of RCTs is that:
“The difference between [these] two groups is going to be due to the program and not due to differences in characteristics between the two groups...You really are starting to compare apples to apples.”*

- Julie Edmunds, Program Director, University of North Carolina at Greensboro

Key Considerations when Implementing an RCT

- A common barrier to implementation of RCTs is concerns about the fairness of providing a program or intervention to a treatment group but not the control group because the control group might be denied something beneficial to them. The speakers addressed these ethical concerns:
 - Randomization can be fair if there are naturally scarce resources that cannot accommodate all interested participants because of limited capacity and/or high costs.

- Program participants assigned to a treatment group to receive a program or intervention will have opportunity costs in the form of foregone time or an alternative effect.
 - During a selection process for a program, people often have known and unknown biases that may influence who receives a program or service that is not fair to everyone. Randomization can mitigate these biases by providing equal probabilities an individual is able to receive or participate in a program randomly assigned.
- A common downfall when conducting RCTs is failing to fully develop the intervention before the trial begins. A diverse group of stakeholders from a variety of disciplines can inform the development of a complete intervention. Researchers must also ensure that they understand the dynamics of current systems in the state agencies where interventions will be implemented.
 - A difficulty for those interested in starting RCTs can be finding the proper research capacity and expertise. The NC Office of Strategic Partnerships is available to assist agencies with identifying research capacity and expertise to conduct RCTs.

SPEAKERS

Julie Edmunds, Program Director, SERVE Center, [University of North Carolina at Greensboro](#)

Bryan K Ryan, Senior Vice President, Effectiveness and Innovation, [Wake Technical Community College](#)

Nicole Sullivan, Deputy Secretary, Analysis, Programming, and Policy, [NC Department of Public Safety](#)

Jeff Grimes (moderator), Evidence Advisor, [NC Office of Strategic Partnerships](#)



Click [HERE](#) to watch the full session.

The North Carolina Office of Strategic Partnerships (OSP) develops, launches, and enhances partnerships between state government and North Carolina’s research and philanthropic sectors.

OSP works with state government and non-governmental partners on priority issues, develops and convenes networks of public sector and research experts, and provides learning and engagement opportunities. These efforts help to deepen connections between North Carolina state government and external research experts and to increase state government’s internal capacity to generate and use evidence to improve policies and programs.



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