

Secondary Data Analysis for Education Policy and Practice Collaborative: An Area of Unique Distinction

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Executive Summary

The Secondary Data Analysis for Education Policy and Practice Collaborative Research led by Paul Fitchett and including Tina Heafner and Rich Lambert would like to be considered as an area of unique investment. Over the last decade, Drs. Fitchett along with Heafner and Lambert have collaborated or singularly spearheaded research projects using US Department of Education (ED) secondary datasets. The breadth of this partnership has proven wide and prolific including studies of teacher working conditions, teacher stress vulnerability, the national scope of elementary social studies, and learning outcomes in US History, Civics, and Economics. To date, studies have been published in an array of academic journals and featured in various national and local media outlets. The research has been cited over 900 times in various academic journals, books, technical reports, policy briefs, and policy actions. The collaborative's scholarship has been recognized within the College of Education and among the larger field of educational research. The team has received three college-wide research awards and it has been recognized by the American Education Research Association Social Studies Research Special Interest Group and the Teacher Stress Special Interest Group for the quality of the studies. The scope, rigor, and impact of the team's research has led to intramural and extramural funding opportunities, including funding from the Lyle Spencer Foundation. More recently, this body of scholarship has informed IES grant funding, served as the research-basis for advocacy actions of the National Council for the Social Studies (NCSS), and captured the attention of the National Assessment Governing Board (NAGB) which oversees the administration of the National Assessment of Educational Progress (NAEP). Furthermore, the team has provided an asset to doctoral student research. Collectively, Drs. Fitchett, Heafner, and Lambert's secondary dataset research, interdisciplinary partnership has examined the intersections among teacher working conditions, educational contexts, and teaching/learning outcomes, which helps explore fundamental questions in education research. These questions have included:

1. What is the relationship between social studies (i.e., history, civics, economic, and geography) teachers' instructional decision-making and student learning?
2. What school and classroom factors are associated with teachers' risk for occupational stress?
3. To what extent do teachers' racial/ethnic match with the students in their school predict risk for occupational stress?

These studies only demonstrate the possibilities of research conducted with ED datasets. The vast amount of datasets available to education and policy researchers from the federal government is substantial. With additional funding toward building human capital (including graduate assistants to mentor/collaborate on various projects) and capacity (designated office space with an array of statistical packages available), this collaborative could establish the Cato College of Education as the premier hub of secondary data analysis for educational purposes in the field. The Cato College of Education remains well-positioned to grow this collaboration given recent institutional investments. The Educational Research, Measurement, and Evaluation PhD program and PhD in Curriculum and Instruction Program provide two potential opportunities to create research prospects and mentorship for doctoral students. The various faculty expertise in the college, both methodological and content-specific, offers unique possibilities for cross collaboration and interdisciplinary research and funding. Nurturing this collaboration has the added benefit of supporting research projects that are fundable from a host of outside foundations and government entities that have historically supported secondary data analysis research.

Evidence of Strength and Impact

David Berliner¹ once quipped that educational research is the “hardest research of all,” alluding to the various factors, exogenous and endogenous, that researchers have to navigate in pursuit of their research goals. Educational research is particularly daunting because it is difficult to isolate a desired, measurable outcome given the various moving parts associated with schools, children, teachers, and the communities. Large, secondary datasets produced by the National Center for Education Statistics (NCES)² offer a unique opportunity to disentangle these complexities. The various surveys, assessments, and longitudinal projects undergo robust data collection methods that produce nationally representative data. The depth of these datasets includes numerous scales, inventories, performance assessments, and demographics data, opening numerous pathways toward exploration. Because these secondary data are collected using the financial resources of the federal government, researchers who use these data do not contend with the logistical issues typically associated with human subjects data collection; including recruitment, informed consent, and de-identification. Thus, access and analysis of NCES datasets are a valuable research and educational tool.

Members of the collaborative have published 29 articles co-jointly. In addition, they have published two books, 18 book chapters and 15 articles with doctoral students. Articles have appeared in highly selective journals including *Educational Analysis and Policy Archives*, *Theory & Research in Social Education*, *Teaching and Teacher Education*, *Teachers College Record*, *Educational Policy*, and *The High School Journal*. Collectively, the collaborative research of Drs. Fitchett, Heafner, and Lambert have been cited 943 times.

Research generated from the collaboration has drawn substantial recognition within the college of education and across the field of educational research. The collaborative won three College of Education research awards. Drs. Heafner, Lambert, and Fitchett have also been recognized for their research at the American Education Research Association. The members of the collaborative have demonstrated an ability to secure external funding from a wide array of resources. Dr. Lambert has received over \$13 million in external grants for his work leading the Center for Educational Measurement and Evaluation (CEME). Heafner has received substantial external funding from federal agencies and philanthropic foundations. To highlight, she led efforts by the National Council for the Social Studies to receive over \$1 million from the US Library of Congress. She also secured grants from the Bill and Melinda Gates Foundation and the Goodnight Foundation. Dr. Fitchett has served as co-principal investigator on successful grants from the US Department of Education, Teacher Quality Partnership Grant initiative (\$1.3 million) and received funding from the Spencer Foundation to examine the longitudinal impact of teacher stress.

The research published by the collaborative has been acknowledged outside of academe as well. Many of these appearances related to the collaborative’s work on NAEP. Drs. Fitchett, Lambert, and Heafner have appeared on the local (WFAE) and national (CBS, NBC, and Huffington Post) news outlets to discuss research associated with the collaborative including teacher stress, teacher moonlighting, and the state of social studies education in the United States. Further details regarding publications, grants, and local outreach are outlined in Drs. Lambert, Heafner, and Fitchett’s curriculum vitae.

¹ Berliner, D. C. (2002). Educational research: The hardest science of all. *Educational Researcher*, 31(8),18-20. DOI: <https://doi.org/10.3102/0013189X031008018>

² National Center for Education Statistics Secondary surveys and datasets can be found here: <https://nces.ed.gov/surveys/>

To date, the collaboration has also helped shape the academic and professional careers of UNC Charlotte doctoral students. Abiola Farinde (PhD in Curriculum & Instruction, at UMass-Boston) used the Schools and Staffing dataset to examine Black, Female teachers' job satisfaction for her dissertation, then published in *Urban Education*, the top journal for urban educational research in the field. Another PhD in Curriculum & Instruction student, Dr. Eugenia Hopper (PhD in Curriculum & Instruction, at Coastal Carolina University) used data from the Beginning Teacher Longitudinal Study to examine predictors associated with teacher turnover among Black teachers over a five year period. She also published her findings in *Urban Education*. Dr. Jessica Norwood collaborated with Drs. Heafner and Fitchett to compare urban and rural teacher characteristics using the National Teacher and Principal Survey (SASS), leading to a book chapter and two conference presentations.

The strength of the collaborative can be traced to the sum of its parts. Dr. Rich Lambert is the college of education's leading educational statistician, bringing over \$13 million in grant money over the last two decades. He has pushed the team to consider sophisticated analytic procedures that allow for more nuanced outcomes. Furthermore, Dr. Lambert has a background in educational psychology; which has shaped the direction of the research. Dr. Tina Heafner is a leading expert on social studies research and advocacy. In her work with the collaborative, she has spearheaded numerous studies focused on National Assessment on Educational Progress (NAEP) tests in US History and Economics as well as seminal social studies marginalization studies with SASS and NPTS (National Principal and Teacher Survey). Dr. Fitchett is recognized by his peers in social studies for being one of the most prolific quantitative researchers in the field. Alongside Dr. Heafner and Dr. Lambert, he has published some of the most-cited studies on elementary social studies marginalization. In addition to his work in social studies, Dr. Fitchett is an expert in teacher working conditions, having published several studies on how classrooms, organizational bureaucracy, and policy contexts are predictive of teachers' risk for stress.

Large secondary data analysis is a relatively cost effective approach toward conducting education research because data is collected by other entities (e.g., federal or state). However, the scope of the data can be quite daunting. Secondary datasets often encompass tens of thousands of cases that are measured across hundreds of variables. Additional resources would include funding for graduate students from the Educational Research, Measurement, and Evaluation PhD program and PhD in Curriculum and Instruction to work and study as part of the collaborative. Secondary datasets offer a unique learning experience for doctoral students to hone their research skills and explore a myriad of research questions related to teaching, learning, school working conditions, and education policy. Working with professors attached to the collaborative, doctoral students can develop a research trajectory that will increase their prospects on the competitive higher education job market. Furthermore, funding for doctoral students would support faculty research productivity by providing additional manpower toward data re-coding and analysis. Secondary datasets have unique infrastructure considerations. Data licenses with the federal government require data storage on a standalone machine that is not connected to the internet. For the collaborative to continue to grow, it requires additional designated space for researchers. A larger room that allows multiple individuals to discuss projects would help improve productivity. Further, licenses to additional research software such as WinSteps, HLM, and MPlus would help members of the collaborative develop sophisticated statistical models in support of competitive grant proposals and dissertation work.

Alignment with Regional and National Priorities

The research trajectory of the Secondary Data Analysis for Education Policy and Practice Collaborative aligns with the current mission of the University of North Carolina at Charlotte. Research projects undertaken by Drs. Heafner, Lambert, and Fitchett maintain “*a particular commitment to addressing the cultural, economic, educational, environmental, health, and social needs of the greater Charlotte region.*” The studies generated by the team have real world applications for the education sector. The collaborative also fits within historic and contemporary institutional initiatives. Drs. Fitchett and Lambert received funding from the former Project Mosaic to collaborate with researchers at the University of Texas-Austin. Those seed funds generated a successfully funded Spencer Grant proposal. With the additional funding and resources noted above, the collaborative’s work could be partnered with current institutional priorities including the university’s School of Data Science; which “brings academia and industry together to turn data into knowledge, and knowledge into insight to see what’s possible in the new digital age.” Education is one of the largest industries in the Charlotte metro area. Harnessing the potential of “big data” and partnering educational researchers with experts in data science is likely to produce projects that resonate with local stakeholders and draw the interest of external funding agencies.

One of the largest external funders of educational research is the US Department of Education Institute of Education Sciences (IES), which funds numerous educational projects within the dimensions of exploration, experimentation, and evaluation. Funding streams are divided among five goals that reflect a continuum of education research.³ The secondary data analysis conducted by the collaborative aligns with IES Goal One: Exploration. Under this goal, researchers explore “*malleable factors*” that can change the educational system. The purpose of this goal is to generate hypotheses that can be used to generate additional policy and practice. The collaborative’s expertise is well-positioned to explore various requests for proposals under this goal. The second largest external funding agency in education is the National Science Foundation (NSF). One of the NSF’s Big Ideas includes “*Harnessing the Data Revolution*;⁴” which includes as one of its guiding principles, “*Educational pathways - Innovations grounded in an education-research-based framework.*” We envision this potential pathway twofold. First, with support, NSF funding could be used to generate new, scalable understandings of the complex, “hard” science of education across an array of outcomes and disciplines. Second, the collaborative could serve as an educational tool for graduate students in the college of education and other disciplines interested in examining large-scale educational issues.

In conclusion, the Secondary Data Analysis for Education Policy and Practice Collaborative has produced award-winning research that has enhanced the reputation of the UNC Charlotte, Cato College of Education. Members of the collaborative have successfully obtained external funding, used the collaborative to support graduate student research, and received recognition for research excellence. Further investments in infrastructure and graduate student support will only enhance the research and grant procurement productivity of Drs. Fitchett, Heafner, and Lambert and allow for inclusion of additional research partners from within and outside the college of education.

³ https://ies.ed.gov/director/board/briefing/ncer_structure.asp

⁴ https://www.nsf.gov/news/special_reports/big_ideas/harnessing.jsp

Supporting Documents

Name	Title	Expertise
Dr. Paul G. Fitchett, EdD	Assistant Dean, Cato College of Education, Professor of Social Studies and Teacher Education	Expertise in secondary dataset analysis, education policy analysis, social studies research, teacher working conditions
Dr. Tina L. Heafner, PhD	Professor of Social Studies Education, Graduate Program Director Phd in Curriculum and Instruction	Expertise in social studies research, NAEP datasets, social studies education policy, advocacy, graduate studies
Dr. Richard G. Lambert, PhD	Professor of Education, Evaluation, and Measurement	Expertise in education psychology, teacher stress, program evaluation, statistics