

ADDRESSING A

Multi-Billion Dollar CHALLENGE

Advancing Knowledge of How High-Quality School
Environments Can Positively Affect Educational Outcomes

FINAL REPORT | DECEMBER 2023

APPENDICES

Study Replication Resources

PERKINS —
EASTMAN

AIA COLLEGE
OF FELLOWS

DREXEL UNIVERSITY
School of
Education

J+J FLOORING

CDEO

BALTIMORE CITY
PUBLIC SCHOOLS

invontics
RESEARCH | KNOWLEDGE | COLLABORATION

DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

APPENDIX G

Archival Data Replication

In addition to the original data produced by this study (from the IEQ data logging with live measurements; visual assessments, with floor plan analysis and photography; stakeholder questionnaires; and stakeholder interviews and focus groups), it is important to identify and secure as much relevant archival data as possible about the participating schools, school districts, and surrounding communities. This data can supplement the research team's understanding of the Educational Adequacy and Community Connectivity of each school in the study's sample.

The following steps are recommended for collecting archival data.

- Obtain archival data from publicly available school district and state Department of Education websites. Note, how robust such data are will vary from district to district and state to state.
 - Focus on archival data relating to school performance measures (e.g., enrollment rates, graduation rates, truancy, standardized test scores) to develop a holistic picture of a school's Educational Adequacy.
 - If possible, collect data spanning at least a ten-year period prior to when the research study is initiated to have a sufficient depth of data for statistical analysis.
- Aggregate archival data at the school level, if available, for such things as enrollment, performance on standardized tests, truancy, and graduation rates, since this study's findings suggest that most, if not all, of these metrics can be related to the modernization of school buildings.
 - Determine whether any datasets may be skewed because of extraordinary circumstances, such as disruptions that occurred during the COVID-19 pandemic. For instance, in this study, the research team could not use truancy data because the pandemic severely skewed that metric.
 - Create two datasets, one for modernized schools and one for non-modernized schools, so comparisons can be made during data analysis.
 - Identify any upward or downward trends in data categories, noting any differences in data trends that align with a school's modernization status.
 - In cases where differences between the data for modernized versus non-modernized schools are observed, use Repeated Measure ANOVAs to determine whether changes in a performance measure were statistically significant over time.

(blank page)

CONTACT US

We welcome further inquiry about the study and how to apply the findings to the modernization of schools.



**Co-Principal Investigator,
Educational Adequacy/Primary and
Secondary Education Design Lead**

Sean O'Donnell FAIA, LEED AP
Principal, Perkins Eastman
s.odonnell@perkinseastman.com



**Co-Principal Investigator,
Community Connectivity/School
Dynamics Lead**

Bruce Levine JD
*Clinical Professor and Director of
Educational Policy Program, School of
Education, Drexel University*
bl63@drexel.edu



**Indoor Environmental Quality/
Sustainability Lead**

Heather Jauregui AIA, LEED AP
BD+C, O+M, CPHC
*Director of Sustainability and
Associate Principal, Perkins Eastman*
h.jauregui@perkinseastman.com



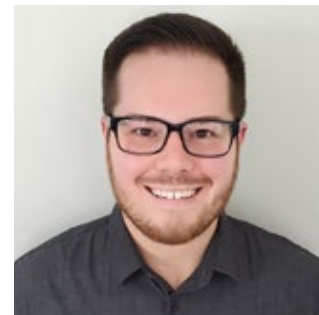
Research Lead

Emily Chmielewski EDAC
*Design Research Director and Senior
Associate, Perkins Eastman*
e.chmielewski@perkinseastman.com



Project Manager

Karen Gioconda NCIDQ,
LEED AP, ID+C
Associate Principal, Perkins Eastman
k.gioconda@perkinseastman-dc.com



Statistician

Lance Kruse PhD
CEO, Invontics
www.invontics.com

**PERKINS —
EASTMAN**



DREXEL UNIVERSITY
School of
Education