



Standards for Reporting on Empirical Social Science Research on Minnesota Students of Color & American Indian Students

Adopted by MnEEP Board January 19, 2012

A. Preface Statement

Minnesota Education Equity Partnership (MnEEP) is a non-profit organization arranged as a collaboration of higher education, K12 education institutions, and communities of color for the purpose of increasing the success of students of color. MnEEP is guided by principles of racial equality, race equity, and educational excellence.

In producing this call for standards to guide research reporting on students of color, MnEEP is responding to the desire by those communities to have their realities expressed in an authentic and transparent manner that does not depict them in a manner as existing outside of societal norms but rather as distinct expressions of a richly diverse social structure within which they play a vital part of its existence. As such, it is helpful that information depicting their relationship to others not be reported in such a manner as to validate nor repute the “normality” of other communities that make up our society, but rather that contributes to an understanding of the dynamics that shape social relationships, decision making, and structures. When the norms of one group are used to describe the information produced – as historically has been the case in reporting research about communities of color – it is vitally important to be transparent about that application of reporting.

MnEEP calls upon all those who prepare to report on research about students of color to use the following recommendations as a guide to such reporting. MnEEP itself will be guided by these recommendations in its reporting work and also will use them to review and comment on the reporting of others.

MnEEP acknowledges this document to be a “living document” i.e. that we will continue to shape it, and its recommendations, in a transparent and collaboratively engaging manner with researchers, reporters, community advocates and others committed to the principles stated here.

MnEEP acknowledges the American Educational Research Association (AERA) for their work in creating reporting standards for empirical social science research adopted in 2006. MnEEP is guided by this work.

B. Preamble to Standards

Based on the two primary principles of reporting standards for AERA, we support the following requirements:

1. Reports of empirical research should have **sufficient warrants**; that is, enough evidence needs to be presented to support and justify the results and conclusions
2. Reports of empirical research should be **transparent**; the report should clearly explain the logic of inquiry, including the development of initial research questions, concrete definitions of variables, methods of data collection and data analysis, and how these result in clearly described outcomes or findings of the study.

The AERA *Reporting Standards* include eight general areas:

1. problem formulation;
2. design and logic of the study;
3. sources of evidence;
4. measurement and classification;
5. analysis and interpretation;
6. generalization;
7. ethics in reporting;
8. and title, abstract, and headings.

All eight elements are important to sound reporting. However, the focus in this document will be on elements of **analysis and interpretation** and on elements of **generalization**. We combine the work of AERA, APA, and minority scholars that have addressed the unique contexts of research in communities of color.

C. Standards

Analysis and Interpretation

AERA General Area # 5: Analysis and Interpretation

In general:

- 5.1. The *procedures used for analysis* should be precisely and transparently described from the beginning of the study through presentation of the outcomes.
- 5.2. *Analytic techniques* should be described in sufficient detail to permit understanding of how the data were analyzed and the processes and assumptions underlying specific techniques.
- 5.3. The analysis and presentation of the outcomes of the analysis should make clear how they *support claims or conclusions* drawn in the research.
- 5.4. Analysis and interpretation should include information about any *intended or unintended circumstances* that may have significant implications for interpretation of the outcomes, limit their applicability, or compromise their validity.
- 5.5. The *presentation of conclusions* should (a) provide a statement of how claims and interpretations address the research problem, question, or issue underlying the research; (b) show how the conclusions connect to support, elaborate, or challenge conclusions in earlier scholarship; and (c) emphasize the theoretical, practical, or methodological implications of the study.

Regarding Statistical Tests:

While many statistical analyses may be carried out in a study, typically only a subset is critical to the eventual results and interpretations. It is important to report the results of analyses that are critical for interpretation of findings in ways that capture the magnitude (practical significance) as well as the statistical significance of those results. Quantitative indices of effect magnitude (effect size indices) are a useful way to do this.

- 5.6. Reporting should clearly state *what statistical analyses were conducted and the appropriateness of the statistical tests*, linking them to the logic of design and analysis and describing them in enough detail that they could be replicated by a competent data analyst.
- 5.7. *Descriptive and inferential statistics* should be provided for each of the statistical analyses that is essential to the interpretation of the results.
- 5.8. Any *considerations that arose in the data collection and processing* (e.g., attrition, missing data, ceiling or floor effects, deviations from standard administration of instruments, and suspected cheating) that might compromise the validity of the statistical analysis or inferences should be reported.
- 5.9. Any *considerations that are identified during the data analysis* (e.g., violations of assumptions of statistical procedures, failure of iterative statistical procedures to converge, changes in data analysis models necessitated by unexpected data patterns) that might compromise the validity of the statistical analyses or inferences should be reported.
- 5.10. For each of the *statistical results* that is critical to the logic of the design and analysis, there should be included:
 - An index of the quantitative relation between variables (an effect size of some kind such as a treatment effect, a regression coefficient, or an odds ratio) or, for studies that principally describe variables, an index of effect that describes the magnitude of the measured variable.
 - An indication of the uncertainty of that index of effect (such as a standard error or a confidence interval).
 - When hypothesis testing is used, the test statistic and its associated significance level.
 - A qualitative interpretation of the index of the effect that describes its meaningfulness in terms of the questions the study was intended to answer.

AERA General Area # 6: Generalization

- 6.1. Whether generalization is intended by the author or not, it is crucial to make clear the *specifics of the participants, contexts, activities, data collections, and manipulations* involved in the study.
- 6.2. When generalization is intended, the author should make clear the *intended scope of generalization* of the findings. It is helpful to delineate the situations in which the findings of the investigation do *not* apply. If the primary generalization is to identifiable problems or practical issues, reporting should make clear the situations in which the findings have applications, implications, or practical consequences and why this is plausible.
- 6.3. Generalization that is intended by the author should make clear the *logic by which the findings of the study should apply within the intended scope of generalization*. The logic should also identify and present evidence that may be necessary to support the validity of the claims of generalizability (such as evidence that the individuals in the study resemble those in the population of generalization in relevant respects).

D. Recommendations specific to Research in Communities of Color

1. Classification schemes, race, and ethnicity

- a. Choice of designator and subgroup classifications

- Race/ethnicity as reported in categories similar to the US Census is useful in broad public-policy respects. However, it is often more important to understand subgroup characteristics that are more relevant for program and community-based policy development. When possible, these more interpersonal characteristics should be gathered. Examples include:
 - Generational status
 - Gender
 - Length of time in USA
 - Family history of formal education
 - Employment status and job type
 - Indicators of socio-economic status
 - Family structure

The point here is that the subgroup classification categories should be relevant to the phenomena under study. When examining educational outcomes, policy, community, family, and individual characteristics that are relevant and meaningful should be used to understand disparities or similarities.

b. Availability of national origin or ethnic background information

Similar to the issues raised above, when possible, specific ethnic background or national origin are generally more informative and should be used for understanding subgroup differences.

c. Multi-ethnic variations

Inter-racial and inter-ethnic family blending continues to increase. Rather than collecting “multiracial” counts, it will generally be more informative to collect information about the racial/ethnic combinations as well as affiliation or primary self-identification with any given subgroup or combination.

d. Usefulness of longitudinal tracking on standard race categories

To the extent that prior reports used inadequate labels or categories, it is an ethical imperative to improve data collection and reporting strategies, even if it means a departure from longitudinal tracking.

2. Comparative inferences

a. Cross-sectional

- (*example*: survey of 2010 MN Latino students, one time study)
- Single time point
- Sampling strategy
- Representativeness
- Compositional differences

b. Tracking a panel over time

- (*example*: tracking exactly the same individuals over time)
- Tracking drop-outs and leavers
- Changes in denominator

- c. Comparisons of cohort status over time
 - (*example*: tracking high school seniors from 2005, sampling different individuals)
 - Changes in composition due to sampling
 - Changes in denominator

- d. Comparisons of trends over time
 - (*example*: trends of 1st year college students, different population each year)
 - Composition differences

- e. Special considerations for subgroup comparisons
 - Group effects can be hidden when examining relations among variables across groups (when aggregating data across subgroups)
 - Need to consider issues related to group effects – either estimate relations among variables by subgroup or use a model that takes into effect nesting structures of data (for example, students nested within schools)

Resources

Several professional organizations have developed standards for research and reporting. Some of these efforts have resulted in the following documents.

American Educational Research Association. (2000). *Ethical standards of the American Educational Research Association*. Retrieved online at http://www.aera.net/publications/Default.aspx?menu_id=30&id=52

American Educational Research Association. (2006). Standards for reporting on empirical social science research in AERA Publications. *Educational Researcher*, 35(6), 33-40. Also available online at http://www.aera.net/publications/Default.aspx?menu_id=30&id=52

American Psychological Association Publications and Communications Board. (2008). Reporting standards for research in psychology. *American Psychologist*, 63(9), 839-851. Also available online at www.apa.org/pubs/authors/jars.pdf

American Statistical Association Committee on Professional Ethics. (1999). *Ethical guidelines for statistical practice*. Retrieved online at <http://www.amstat.org/about/ethicalguidelines.cfm>

In addition, several researchers have made strong recommendations regarding the conduct of research in communities of color. These include the following works:

Baca Zinn, M. (1979). Field research in minority communities: Ethical, methodological and political observations by an insider. *Social Problems*, 27(2), 209-219. Also available online at <http://www.jstor.org/stable/800369>

Cooper, C. R., Jackson, J. F., Azmitia, M., & Lopez, E. M. (1998). Multiple selves, multiple worlds: Three useful strategies for research with ethnic minority youth on identity, relationships, and opportunity structures. In V. C. McLoyd and L. Steinberg (Eds.), *Studying minority adolescents: Conceptual, methodological, and theoretical issues*. (pp. 111-125). Mahwah, NJ: Lawrence Erlbaum Associates.

McLoyd, V.C., & Steinberg, L. (Eds.). (1998). *Studying minority adolescents: Conceptual, methodological, and theoretical issues*. Mahwah, NJ: Lawrence Erlbaum Associates.