Foundational Research Checklist
Based on the Common Guidelines for Education Research and Development

This checklist is a distillation of key points from the *Common Guidelines for Education Research and Development* regarding **Foundational Research**. The *Guidelines,* developed by the Institute of Education Sciences at the U.S. Department of Education and the National Science Foundation, explains those agencies' shared expectations for education research and development. This checklist, created by EvaluATE, is intended to support use of the *Guidelines,* enabling users to quickly reference those that specifically relate to Foundational Research. As such, it provides an overview and orientation to the *Guidelines.* **It does not replace the Guidelines nor does it expand or elaborate on that report's content.** The checklist's content has been extracted (usually verbatim) from the full report. All checklist users are strongly encouraged to read the complete *Guidelines*, available from http://bit.ly/nsf-ies_guide.

Checklists on the other five types of research outlined in the *Guidelines* are available from www.evalu-ate.org/resources/cg_checklist/.

TYPE 1: FOUNDATIONAL RESEARCH to advance the frontiers of education and learning; develop and refine theory and methodology; and provide fundamental knowledge about teaching and/or learning

Justification

Policy and/or Practical Significance

☐   Address important research questions related to education and learning
☐   Have clear implications for policy and/or practice (direct relationship to student outcomes not required)

Theoretical and Empirical Basis

☐   Outline the study's theoretical and empirical bases
☐   Explain why the research is needed
☐   Describe whether and how the study will
    ☐   identify or explore important new constructs in education and learning
    ☐   extend understanding of current constructs
    ☐   explain understanding of relationships among the constructs under investigation
   and/or
    ☐   extend research methodologies for advancing the evidence base to support improved policy or practice

Evidence

Project Outcomes

☐   Advances in theory, methodology, and/or understanding of important constructs in education
☐   Findings that could serve as basis for future studies

Research Plan

☐   Define the study's key conjectures or hypotheses, questions, and objectives—derived from the study's theoretical and empirical justifications
☐   Describe the study design in detail, including:
    ☐   population of interest
    ☐   sampling or selection methods
    ☐   sample size
    ☐   data analysis methods
☐   Describe plans for data management and analysis, curating, and sharing
☐   Describe plan for disseminating findings

For studies that include hypothesis testing:
☐   Identify the minimum relevant mean difference or relationship between variables and sample size required to ensure adequate statistical power to detect true differences or relationships of this magnitude or larger

For qualitative studies:
☐   Justify the sample size and selection plan

For studies analyzing secondary data:
☐   Describe the source and availability of data and sequence of modeling planned

For studies collecting primary data:
- ☐ Describe the instruments and protocols
- ☐ Provide evidence from literature to support assumptions that guide the sample design
- ☐ Describe strategies for ensuring validity and reliability of outcome measures
- ☐ Describe how findings will be triangulated

External Feedback

- ☐ Subject the study to a series of external, critical reviews of its design and activities via one or more of the following strategies:
  - ○ Peer review of the proposed project
  - ○ Ongoing monitoring and review by the grant making agency's personnel
  - ○ External review panels or advisory boards proposed by the project and/or the agency
  - ○ Third-party evaluator
  - ○ Peer review of publications and conference presentations resulting from the project
- ☐ Ensure the external review is sufficiently independent and rigorous to influence the project's activities and improve the quality of its finding