stelar
STEM Learning and Research Center

Data Brief

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The Innovative Technology Experiences for Students and Teachers (ITEST) program was established by the National Science Foundation (NSF) to help ensure the breadth and depth of the Science, Technology, Engineering, and Mathematics (STEM) workforce, in direct response to concerns and projections about the growing demand for and current shortages of STEM professionals in the U.S.

The STEM Learning and Research (STELAR) Center at Education Development Center, Inc., in partnership with the Goodman Research Group, Inc., assists ITEST principal investigators (PIs) and evaluators to design, refine, and evaluate their ITEST projects and to effectively synthesize and disseminate project findings.

These periodic Data Briefs explore results reported by ITEST project leaders in the Management Information System (MIS), which collects information each year from all active ITEST projects about what the projects do, whom they serve, and their successes and challenges.

For more information, questions, or comments:
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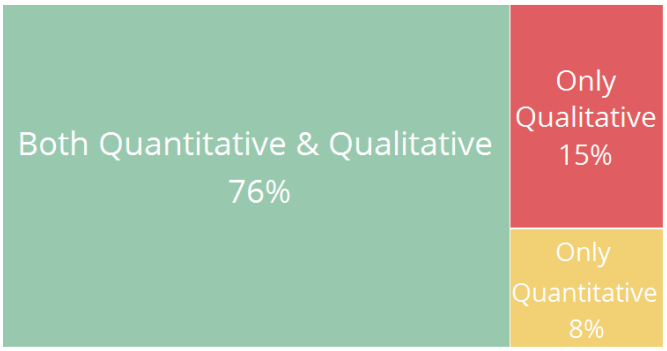
NSF EDC Learning transforms lives.

Research Methods in ITEST

The ITEST program requires that **all proposals include a research component**. This data brief examines the **63 projects** that described their research between September 1, 2014 and August 31, 2015 as reported in the 2015 Management Information System (MIS) survey.

What kinds of study designs do projects use?



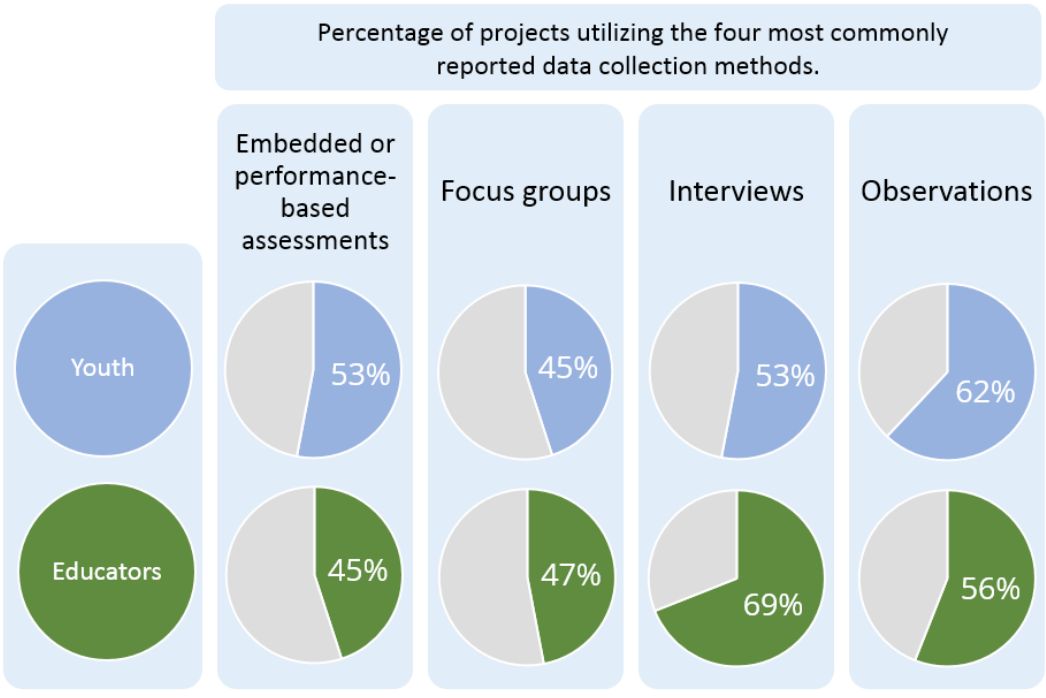
45 out of **63** projects reported using both **qualitative** and **quantitative** study designs to measure their project's outcomes.

26% of projects used **comparison groups**

66% of projects used **pre- and post-tests**

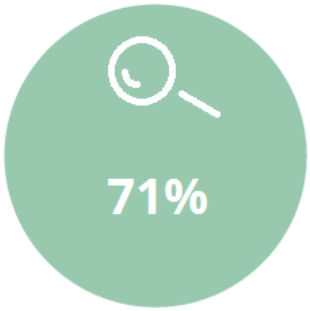
Which tools do projects use to measure outcomes?

ITEST projects use a multitude of tools to capture data from their participants. More than **66%** of reporting projects used at least **3 tools** to collect data from youth and educators.

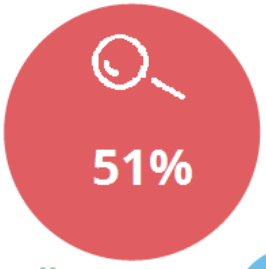


What kinds of instruments do projects use?

The innovative nature of ITEST projects present a challenge in finding an appropriate evaluation instrument, leading many projects to modify externally developed instruments, internally develop instruments, or use a combination of both.



use **externally** developed & validated instruments



modify externally developed and validated instruments to fit specific project needs

use only **internally** validated instruments

use **both** externally and internally developed and validated instruments

Visit the resources section of the STELAR site to view evaluation instruments used by ITEST projects

What data do projects intend to collect from participants after funding is over?

More than 1/3 of projects plan to follow up with participants after the official grant funding period has ended.

14% plan to follow up with **teachers** regarding their use of knowledge and materials

59% plan to collect data from **youth** participants, including subsequent academic and/or career choices

How do ITEST projects describe their key findings?

Most projects cited gains in student interest and STEM/ ICT content knowledge.

Projects also found that professional development had a positive impact on teacher confidence in STEM subject areas.

Teacher content knowledge was associated with student impacts.

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