Study Group

FROM SEED FUNDING TO SCALE

U.S. Department of Education and Institute of Education Sciences' Small Business Innovation Research (ED/IES SBIR) Program Impact Analysis (2012–2022)

EXECUTIVE SUMMARY

AUGUST 2025

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What is ED/IES SBIR and why does it matter?

Established in 1982, the federal Small Business Innovation Research (SBIR) program requires United States government agencies with extramural R&D budgets over $100 million to set aside a portion (currently 3.2%) for seed funding small for-profit firms to drive innovation and commercialization.[1] The Department of Education's SBIR program, administered by the Institute of Education Sciences and known as **ED/IES SBIR**, funds early-stage R&D and pilot testing of new education technology products aimed at improving outcomes for students, educators, and administrators in general and special education.

Funded projects typically progress through **Phase I** (iterative prototype development), **Phase II** (full product development and pilot evaluation), and **Phase III** (commercial launch and scale-up, supported by non-SBIR funding). While only about half of Phase I projects advance to Phase II, many firms continue development independently by securing other funding or self-funding.

Over the past two decades, ED/IES SBIR has supported the creation of a wide range of innovative products, including AI-based personalized learning programs, diagnostic and formative assessments, tutoring systems, learning games, multimedia environments, AR/VR tools, educator dashboards, and assistive technologies. These products are commercialized through direct sales to schools, licensing agreements, or acquisition by larger companies—often enabling wide-scale adoption. Many firms also continue to partner with researchers to conduct evaluations after commercialization.

*For examples of product types, commercialization pathways, and research partnerships, visit the **ED/IES SBIR Success Story** page.*

Purpose of this report

This impact analysis synthesizes self-reported data from 104 companies that received ED/IES SBIR Phase I or Phase II awards between FY 2012 and FY 2022, representing a total of $91.89 million in funding. It estimates the program's social reach and economic return on investment (ROI) achieved with those public funds. All findings are reported in aggregate, no firm-level results are disclosed, to encourage participation and protect proprietary information.

[1] *The Small Business Technology Transfer (STTR) program provides similar "seed" awards to non-profit research partners. ED/IES SBIR does not operate an STTR program; hence this report does not cover STTR.*

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Portfolio-Level Findings at a Glance

1 Products fully developed and commercially launched

Of the 104 firms that were recipients of an ED/IES SBIR award, 73 (70%) fully developed and then commercialized one or more research-based products. *69 of 73 of these firms completed the survey, 4 indicated they developed and commercialized a product but did not complete the survey.*

2 Social Reach

Approximately 131 million students, educators, and administrators have used ED/IES SBIR – supported products – equating to about $0.70 in federal funding per user.

3 Economic Leverage

Cumulative product revenues, follow-on capital, and disclosed acquisition proceeds total roughly $828 million, yielding an aggregate economic ROI of approximately 9:1 (private-sector return per public dollar invested).

- **3a. Sales & Licensing:** $268.1 M
- **3b. Non-dilutive follow-on grants/awards:** $110.7 M
- **3c. Dilutive equity investment:** $85.3 M
- **3d. M&A proceeds (11 disclosed deals):** $363.5 M

4 Firm Growth

Among 61 firms that provided data on employment at the time of the first award and in May 2025 at the time of the data collection (or at the time of acquisition), full-time employment grew from 643 to 1,225 (a 91% increase).

5 Research and Practice to Products Used at Scale

25 of 69 responding firms (36%) indicated that at least one of their SBIR supported products originated as academic research and an additional 13 companies (19%) reported that their product originated in a classroom by an educator.

6 Spillover Effects

Awardees reported new R&D collaborations, derivative product lines, and greater engagement with schools and communities.

Portfolio-Level Findings at a Glance *(Continued)*

Interpreting the results, ED/IES SBIR demonstrates social and economic benefits across many areas in the education technology ecosystem:

High catalytic value: Underscoring the program's role in creating marketable research-based products rather than merely subsidizing small businesses, in response to the question whether their product would have been developed, evaluated, and commercialized without ED/IES SBIR funding, 52 of 69 (75%) responded no, another 15 of 69 (22%) indicated maybe, and only 2 (3%) indicated the product would exist without SBIR funding.

Efficient use of public funds: With less than $1 of federal funding per user, ED/IES SBIR seeded research-based products deployed at scale in classrooms and out-of-school learning settings.

Robust private-sector follow-through: Every $1 of ED/IES SBIR funding leveraged roughly $9 in sales, investment, and acquisition value—comparable to or even exceeding the ROI reported by larger SBIR programs at other federal agencies.

Workforce gains: The program not only funds new products, but also helps small firms grow. Among the 61 firms that developed and launched a product and that responded to the survey question, total full-time employment roughly doubled from the start of the award until now (or at the time of acquisition), adding over 580 positions.

Pipeline for scaling research and classroom innovation: By supporting firms to partner with both university researchers and school-based educators, ED/IES SBIR creates a pathway for many research and evidence-based and practitioner-led innovations to be transformed into commercially viable and scalable products.

Building a research-based education ecosystem: All Phase II projects are required to conclude with a pilot test of the promise of the product to lead to the intended outcomes, and more than half of firms who developed and commercialized a product partnered with researchers for additional research and evaluation after the project periods, demonstrating the role of ED/IES SBIR in growing a research-based ecosystem in education technology.

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Study Limitations

The findings rely on self-reported, unaudited data. In some cases when an acquisition of a product or a licensing agreement with another organization occurred, firms could not track wider usage or revenue metrics after licensing or acquisition, so the reported totals could be conservative. The analysis also lacks a comparison group, and usage counts are cumulative (not annual), limiting any growth-rate analysis. Nonetheless, the study accounted for all 104 companies that received ED/IES SBIR Phase I or Phase II awards between 2012 and 2022, and the questionnaire captured 95% (69 of 73) of the firms that had commercialized a new product and provides the most comprehensive snapshot of ED/IES SBIR's impact to date.

Implications for Policymakers

1. **Modernize and Increase SBIR-Inspired Investments in AI for Teaching & Learning**
   The program's broad reach and ~$9:1 economic ROI make a strong case for upgrading the approach in alignment with "Winning the Race: America's AI Action Plan" as a central stream of future federal education R&D and innovation investments.

2. **Compliment this Approach With Scale Up Phase Investments**
   With nearly one in five firms acquired by larger companies, the program could explore complementary initiatives or public-private partnerships to further assist successfully developed research and evidence-based products in achieving widespread adoption in schools.

3. **Strengthen Investment Data Infrastructure**
   Pair expansion of SBIR inspired education technology AI investments with routine, lightweight outcome reporting (for example, brief annual surveys linked to procurement or employment data) to improve future ROI estimates and reduce reliance on recall.

4. **Encourage Researchers and Practitioners to Partner with Firms to Develop and Commercialize AI-Powered Teaching and Learning Solutions**
   Conduct outreach and support researchers and educators to forge partnerships with firms to ready evidence-based research and innovative classroom-based models for deployment at scale as education technology products.

Even under conservative assumptions, ED/IES SBIR has demonstrated substantial social and economic returns. It has brought research-based technologies to well over 100 million users, catalyzed hundreds of millions of dollars in public and private investment, helped small firms grow (nearly doubling their collective workforce), and provided a mechanism for researchers and practitioners to partner with firms to advance innovations into commercially viable products used at scale. As federal education priorities evolve, these data provide a clear quantitative case for upgrading and expanding federal investments in combination of rigorous R&D and market-driven innovation.