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**Proposed Social Spending Innovation Research (SSIR) Program:
Harnessing American Entrepreneurial Talent to Solve Major U.S. Social Problems**

The SSIR proposal seeks to replicate, in social spending, the great success of the Small Business Innovation Research (SBIR) program in technology development.

- **The SBIR program funds technology development by entrepreneurial small companies.** Under SBIR, created by Congress in 1982, 11 federal agencies allocate a small percentage of their annual research and development (R&D) budgets, to make funding awards to small companies to develop and test innovative new technologies. The goal is to reach beyond the usual federal R&D grantees (e.g., universities, large defense contractors) to fund a new set of entrepreneurs. The program has spawned breakthrough technologies in diverse areas such as computer chip production, commercial satellite communications, and medical imaging; and has received consistently favorable reviews in assessments by the Government Accountability Office¹ and National Academy of Sciences.² Congress reauthorized and expanded SBIR with overwhelming bipartisan support in 1992, 2000, and 2011; it is now funded at over \$2 billion per year.
- **The new program, SSIR, would apply the successful SBIR approach in a different (non-technology) field – social spending.** Like SBIR, SSIR would fund the development and rigorous testing of entrepreneurial ideas across multiple federal agencies and policy areas – but in social spending, rather than technology development. Analogous to SBIR, it would be funded through a small allocation from each agency’s budget for discretionary social spending.
- **The remainder of this paper provides a specific illustration of how the SSIR concept would work in the area of education policy.** A separate [paper](#) summarizes the wider, cross-agency proposal.

U.S. education policy critically needs an SBIR-like infusion of entrepreneurial new ideas and rigorous testing, because:

- **Many activities/strategies (“interventions”) funded by federal education programs are found to produce weak or no positive effects when rigorously evaluated.** Most large federal education programs that have been evaluated in well-conducted randomized controlled trials have been found to produce, on average, small or no sustained improvements in educational outcomes.³ Undoubtedly, some interventions and/or local grantees funded by these programs are effective, but their effect is diluted out by the many that are ineffective, yielding small or no *average* impacts.
- **Meanwhile, the reading and math achievement of 17-year-olds – the end product of our K-12 education system – is virtually unchanged over the past 40 years,** according to official measures,⁴ despite a 90% increase in public spending per pupil (adjusted for inflation).⁵
- **Yet, entrepreneurs in nonprofits, for-profits, and state/local agencies have developed a few interventions found highly effective in rigorous testing, illustrating what is possible.** Illustrative examples, evaluated in well-conducted randomized trials, include:
 - [New York City’s Small Schools of Choice](#) – small public high schools created citywide in mostly high-poverty communities, which compete for students through the city’s school choice system (shown to increase the rate of four-year high school graduation with

proficiency on the state Regents exams by 4-6 percentage points, at no additional cost compared to traditional high schools).

- [H&R Block College Financial Aid Application Assistance](#) – streamlined personal assistance for low and moderate income families with a dependent child near college age (over a 3½-4 year period, increased college enrollment and persistence by 29%, compared to the control group).
- [Success for All in grades K-2](#) – a school-wide reform program, primarily for high-poverty schools (three years after program start, increased school-wide reading achievement in second grade by 25-30% of a grade level).

- **Such examples are rare because federal education spending has no systematic mechanism, analogous to SBIR, to incentivize, fund, and rigorously test innovative field-initiated ideas.** The Department of Education’s evaluation funds generally go toward evaluating programs or interventions selected for testing by Congress or the agency, rather than initiated by innovative entrepreneurs in the field. The Department’s research arm funds field-initiated ideas but is primarily geared to academic researchers and rarely funds entrepreneurial practitioners in nonprofit, for-profit, and state/local government organizations.

The proposed SSIR program would create a streamlined, three-phase process – modeled on SBIR – to fund the development and rigorous testing of innovative educational interventions, as follows:

- **The Department of Education would allocate 1% of its discretionary spending to fund its SSIR program.** If applied initially to the subset of programs funded under the Elementary and Secondary Education Act, the allocation would yield approximately \$200 million each year.
- **The Department would issue an annual solicitation, inviting grant proposals through a streamlined, competitive application process.** The solicitation would set out broad topic areas in which the Department seeks proposals (e.g., preventing school dropouts, increasing reading proficiency), but not specify the approaches that grantees might use.
- **Applicants – including nonprofits, small businesses, researchers, and state and local educational agencies – would apply for grant funding through one of three phases:**
 - 1) **A phase I grant (generally \$50,000 - \$300,000 over one year⁶) would fund the development and feasibility testing of the intervention,** to establish whether it can be successfully implemented – i.e., can enroll and retain participants, and be delivered in adherence to a well-defined protocol, in settings where it would typically be implemented. To be funded, applicants would need to show (i) that prior evidence – even if preliminary in nature – suggests the intervention could produce meaningful positive effects at reasonable cost; and (ii) that the project team includes at least one person in a key role who has previously fielded a social intervention on a sizable scale in a typical community setting, with successful adherence to a defined protocol.
 - 2) **A phase II grant (generally \$0.5 - 3.0 million over 2-3 years⁶) would fund a rigorous – preferably randomized – evaluation of the intervention, at low cost if possible,** by measuring key outcomes with existing administrative data (such as state test scores) rather than through original data collection. The goal would be to measure the intervention’s impact on the primary outcome(s) of interest, as well as obtain basic, low-cost programmatic data on the success of implementation. Phase II grants would range in size, as shown above, depending on such factors as the availability of low-cost administrative data to measure study outcomes, and the cost of the intervention itself.

To be funded in phase II, applicants would need to (i) provide evidence that the intervention has been successfully implemented (e.g., under a phase I grant, or similar effort) in a typical community setting; (ii) present prior evidence (even if preliminary) suggesting the intervention could produce meaningful positive effects at reasonable cost; (iii) include a researcher on the project team, in a key role, who has previously carried out a well-conducted, rigorous impact evaluation, preferably a randomized trial; and (iv) propose a valid study design likely to generate credible evidence about the intervention's impact.

- 3) A phase III grant (e.g., \$3 - 7 million over 3+ years⁶) would fund a randomized replication trial of an intervention found to produce important impacts in a prior rigorous trial (e.g., in phase II).** Phase III would provide larger grants than in phase II, to enable a more comprehensive and longer-term study, but the number of such grants would likely be small since (as in innovative *technology* development) relatively few educational interventions will have been found successful enough in phase II to merit such an investment. The main goals in phase III would be to (i) determine whether the prior positive impacts can be reproduced in a new sample and setting, and whether they endure long enough to constitute substantive improvement in student outcomes (both of which are key final elements needed for strong confidence in the intervention's effectiveness); and (ii) identify reasons why the intervention produced its effects, the conditions and subgroups in which it is most effective, and its impacts on a broader set of outcome measures.

To be funded in phase III, applicants would need to establish that the intervention has been found, in a prior rigorous impact evaluation, to produce sizable positive impacts on outcomes of recognized policy importance such as reading and math proficiency, high school graduation, and college enrollment – and to do so at reasonable cost. Applicants would also need to meet the other criteria described above for a phase II grant.

In phase III, the Department could require or incentivize applicants to provide at least a partial match of funds from other sources (e.g. non-SSIR government funds, philanthropic funds). The goal is to establish that there are alternative sources of sustainable funding to scale up the intervention should the phase III replication prove successful and, over the longer term, to increase the share of government and private funding focused on practices backed by credible evidence.

- **Applicants could proceed sequentially through the phases or, alternatively, could apply for a phase II or phase III grant if they already have the evidence base required for such a grant** (developed through non-SSIR funds).

Conclusion: Modeled on the successful SBIR program, this new program – SSIR – would infuse U.S. education spending with a critically-needed supply of entrepreneurial new ideas, rigorously shown to produce sizable improvements in important educational outcomes.

References

¹ The Government Accountability Office has conducted numerous review of SBIR since the program's establishment in 1982, the results of which are summarized in *Federal Research: Observations on the Small Business Innovation Research Program*, Government Accountability Office, GAO-05-861T, June 2005.

² *An Assessment of the Small Business Innovation Research Program*, Charles W. Wessner, Editor, Committee on Capitalizing on Science, Technology, and Innovation, National Research Council, National Academies, 2008.

³ Illustrative examples include 21st Century Community Learning Centers, Upward Bound, and Even Start. Susanne James-Burdumy, Mark Dynarski, Mary Moore, John Deke, Wendy Mansfield, Carol Pistorino, and Elizabeth Warner, *When Schools Stay Open Late: The National Evaluation of the 21st Century Community Learning Centers Program Final Report*, U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, April 2005. Neil S. Seftor, Arif Mamun, and Allen Schirm, *The Impacts of Regular Upward Bound on Postsecondary Outcomes 7-9 Years After Scheduled High School Graduation: Final Report*, submitted by Mathematica Policy Research to the U.S. Department of Education, January 2009. A.E. Ricciuti, R.G. St.Pierre, W. Lee, A. Parsad, and T. Rimdzius, *Third National Even Start Evaluation: Follow-Up Findings From the Experimental Design Study*, U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, 2004.

⁴ *The Nation's Report Card: Trends in Academic Progress 2012*, NCES 2013-456, National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, 2013.

⁵ Cornman, S.Q., and A.M. Noel, *Revenues and Expenditures for Public Elementary and Secondary School Districts: School Year 2008–09 (Fiscal Year 2009)* (NCES 2012-313). U.S. Department of Education. Washington, DC: National Center for Education Statistics, 2011. Richard H. Barr, *Revenues and Expenditures for Public Elementary and Secondary Education, 1973-74* (NCES-76-140). U.S. Department of Health, Education & Welfare, National Institute of Education. Washington, DC: National Center for Education Statistics, 1976.

⁶ In appropriate cases, the Department could make larger or smaller grant awards than the ranges shown in the text, to account, for example, for the wide variation in cost of developing different types of interventions (e.g., schoolwide reform programs versus text-messaging reminders to students).