

Request for Information for Advanced Education Research & Development Programs
Detailed Overview

PURPOSE

The [Chan Zuckerberg Initiative](#) (CZI) and the [Bill & Melinda Gates Foundation](#) (BMGF) share a common aim: for every child to have educational opportunities that enable them to develop the knowledge, skills, habits of mind, and agency to realize their full potential and live a healthy, productive, and fulfilling life.

In the last decade, promising advances in science, practice, and technology use bring this aspiration within reach. Researchers in education, learning and developmental science, neuroscience, cognitive psychology, technology, and other fields have generated new and significant scientific evidence on how people learn. We know more than ever before about learning across a person's lifespan from infancy through adulthood, in general subjects, and in specific areas like reading and math.

Today, teachers and students have access to resources that enable new types of instruction and more precise information about each student's progress. However, much of the research insights on how learning works—both cognitive and other psychological processes in the brain—has not yet been translated effectively into methods and tools for teachers and students to use in the classroom every day. These research insights must inform ongoing development of tools and instructional approaches that will enable students to overcome math, literacy, and other learning challenges and at scale, in order to reach millions, if not billions, of students.

We are exploring innovative ways to facilitate and accelerate the integration and translation of evidence-informed teaching practices and research into scalable education practices, programs, and tools that support teachers and students. We believe it is possible to harness research and development for dramatic and life-changing improvements in learning and developmental outcomes, thus resetting

expectations for students who are not being well served by our current approaches to education.

As one approach to achieving this aspiration, we are jointly exploring whether transformative education solutions can be developed through an accelerated research and development (R&D) effort. This approach would bring together interdisciplinary teams from education research, human development research, learning measurement, evidence-based technology-enhanced practice, professional development, neuroscience, and other fields. The teams would produce models, practices, tools and other resources that are designed to achieve specific, measurable improvements in student outcomes (both academic and non-academic) across a large range of education contexts.

We believe this approach is well-suited to tackling chronic challenges that are driven by complex cognitive, metacognitive, social-emotional learning, and environmental factors. We know that many ideas and new approaches for improving student learning already exist among universities, schools, curriculum developers, teaching communities, and entrepreneurs. Learning is complex, and requires many ways to support every student and their teachers and families along their path. Our goal is to uncover these ideas and bring the right groups of researchers, developers, and practitioners together to pursue their development and validation.

Through this Request for Information (RFI), we seek to inform the creation of a jointly funded R&D program to pilot this approach. This RFI is solely for information and planning purposes, and responses are not part of a screening or application process and will not result in funding. We will use this RFI to refine our perspective on potential future R&D efforts and to help design future funding programs.

Specifically, we are requesting information on the current state-of-the-art and bold evidence- or strong-theory-grounded visions for new, ambitious developments in the following program areas:

- A. Improving Writing: Developing the Requisite Habits, Skills, and Strategies
- B. Improving Mathematical Understanding, Application, and Related Mindsets
- C. Measuring and Improving Executive Function

We are providing a concept description for each of these three programs, which can be found on the program website. These are, indeed, *draft* descriptions - because we intend, through this RFI, to refine these program ideas, or add to them. We expect they will change, perhaps dramatically, based on your input. Respondents can submit to one or more programs. We will aggregate, anonymize and share what we learn from the RFI

with respondents and the field.

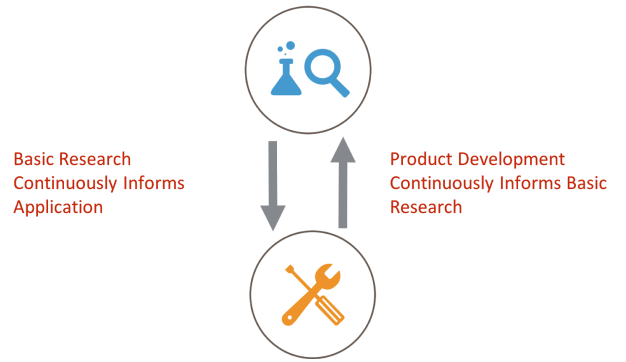
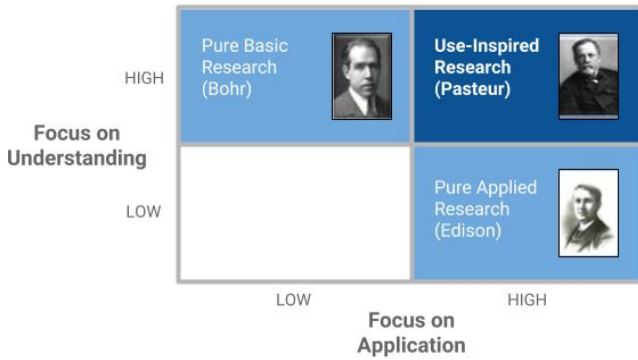
BACKGROUND

Through this RFI, we wish to pilot an approach to accelerated research and development that has been informed by a review of R&D strategies used by organizations well-known for success in developing breakthrough innovations in the public and private sectors. Our intent is to adopt their key strategies and philosophies for an R&D process specifically designed for the education field, and that creates dramatic rather than incremental improvements in learning with the potential to meet the needs of large (especially challenged) student populations.

Why explore a new approach? The creation of scalable innovations in education has been elusive. Education research has been stymied by underfunded efforts that skew heavily towards basic research. Historic approaches to R&D in education have fallen short on several fronts: (1) few developments have produced substantial improvements in outcomes for their target populations, (2) even the most rigorously tested and efficacious developments have struggled to achieve meaningful scale, (3) the diffusion of knowledge between researchers and practitioners lacks consistency and breadth, and (4) the pace of testing and evaluating solutions is slow and narrowly focused.

While these are all significant barriers to success, we believe that meaningful progress can be achieved through focused resources, over a significant period of time, to support collaboration in the education field on the creation of new approaches that immediately integrate research with development.

The prevalent model of R&D funding in education today makes a clear distinction between basic and applied research. This distinction has been reasonably successful in generating knowledge, but may not always be the most optimal path for producing solutions that can be broadly used to address problems in education in practical ways at scale in a wide range of contexts. In the behavioral sciences, including education research, there are often disconnects between basic and applied research due to the very noisy and context-specific nature of human data. Applications often fail due to lack of generalizability of basic research findings.



The program structure we are proposing, focusing on what is known as [Pasteur's Quadrant](#), would collapse the distinction between basic and applied research by iteratively conducting them in tandem while working towards a specific goal. Although not yet widely used in education research, work within Pasteur's Quadrant has shown great [success in both the public and private sectors](#). Programs developed within Pasteur's Quadrant would fund R&D programs that create incentives for practitioners, researchers and developers to work together to translate advances in knowledge into practical instructional practices and tools with the potential for widespread use.

The result of this flexible, interdisciplinary, iterative program structure is an accelerated process for creating innovative solutions to real-world problems. An interdisciplinary, iterative development process requires that projects within the program are not conducted in isolation and are also deeply informed in an ongoing way by user input, which in the case of education means teachers and students. Team participants conduct their own individual projects but work with a program manager to continually share information and expertise with each other towards the goal of creating solutions that integrate the most promising results from across the program. In this R&D model, the program manager is an active participant in program execution and development, works closely with team members to ensure coordinated efforts, and provides nimble direction as lessons are learned by the overall team.

REQUESTED INFORMATION

Responses are welcome from any organizations and individuals, or collaborations of multiple entities, with promising ideas for how existing and new knowledge and tools can be used to tackle the challenges we describe and achieve dramatic results. We encourage responses from both inside and outside the education community, including but not limited to practitioners, universities, university-affiliated research centers, not-for-profit research institutions, professional development organizations, government-sponsored labs, and public and private companies. We anticipate potential future programs ultimately to be composed of diverse teams of experts and developers

across a wide spectrum of disciplines, including those not typically involved in education research.

Submissions do not have to address the entire problem, but can be submitted to address one or more of the “topic areas” listed under each possible program. Submissions should demonstrate either evidence of promise or strong theory to support ideas. Those submitting have the discretion to determine the level of evidence (i.e., evidence of promise or strong theory). Responses to this RFI should both clearly reflect the current state-of-the-art and also describe bold visions of what is possible in terms of impact on students in 10 years if programs and projects are successful. We encourage respondents to present appropriate preliminary evidence that demonstrates the feasibility of a new idea when available, but are open to novel ideas that will require validation. We are not expecting or requiring comprehensive proposals for fully developed solutions for this RFI, rather we are asking you to discuss specific portions of the solution that are relevant to your domain expertise. However, if a comprehensive solution is available, we would like to hear about it. That said, we are not interested in ideas that only create modest improvements in existing models or practices, although we will consider ways to integrate these kinds of projects and strategies with bold new ideas to accelerate innovation and to create significant improvements over current practice.

We are interested in ideas about approaches, models, tools, practices, and other resources that can help students, teachers, families and others which also have the potential to be highly scalable. By scaleable, we mean they address specific unmet needs of a large population of teachers and students (especially those most challenged), are easily and effectively used in a wide variety of contexts, can be delivered in a highly accessible way using existing infrastructure at an affordable cost, and demonstrate impact at a level that is significantly better than existing practice.

DISCLAIMER: PRIVACY AND CONFIDENTIALITY

This RFI is not an application for funding or an offer to contract or award grant funds. BMGF and CZI assume no responsibility for your cost to respond to this RFI. Individual responses to the RFI will be acknowledged but will not receive feedback and are not part of a grant-making application. Participation in the RFI is voluntary and will not result in funding. Any potential future Request for Proposal (RFP) will not require a response to this RFI.

Please note, we are **not** seeking or soliciting personally identifiable information about individual students. Responders may choose to share anonymized information about student outcomes, but they must **not** provide information that contains any personally identifiable student information that may be subject to the Family Education Rights and Privacy Act of 1974 ("FERPA") and its implementing regulations. Any such information

provided to us is unsolicited and will be destroyed. It will also be taken as evidence that the responder is not proficient in handling student information. Should you have questions about what data can be shared, please email

EducationRDRFI@gatesfoundation.org or
EducationRDRFI@chanzuckerberg.com.

All responses generated by this RFI become the property of BMGF and CZI. Responses will help inform our ideas for a future RFP process with the education ecosystem, so respondents should use their discretion when submitting information through this RFI process. To help us in our review of RFI responses, we may disclose documents, communications, and associated materials submitted in response to this RFI to our employees, contingent workers, consultants, independent subject matter experts, and potential co-funders. Please carefully consider the information that you submit. We urge you **not** to submit confidential or proprietary materials as we are under no obligation to treat them as such even if you characterize any information as being confidential. If you have any doubts about the wisdom of disclosure of confidential or proprietary information, we recommend that you consult with your legal counsel and take any steps you deem necessary to protect your intellectual property. Though we do not intend to publicly release specific details of any RFI responses, we plan to share aggregated and anonymized learnings from the RFI with the respondents and the field to further inform future program development. Knowing that RFIs often lead to many great ideas that any entity is unable to support on its own, we also intend to share RFI responses with other funders.

We thank you for your support and collaboration. We are excited to learn from you and appreciate your time in sharing your knowledge and needs with us. Please contact EducationRDRFI@gatesfoundation.org or EducationRDRFI@chanzuckerberg.com with any questions.