



The National Academy of Education/Bill and Melinda Gates Foundation
Equity in Math Education Research Grants (EMERG) Program

The [*Equity in Math Education Research Grants \(EMERG\) Program*](#) is a bold new effort aimed at reconceptualizing the foundations of equitable and ambitious mathematical experiences for K-12 learners, through an innovative program of research and development. The *EMERG* program will create and support an intergenerational community of diverse scholars and practitioners including: 1) an Executive Board consisting of senior researchers and practitioners with expertise in mathematics education research, development, and practice; 2) an Advisory Committee whose expertise spans the mathematical, educational, learning sciences, developmental, historical, linguistic, social, political and practical foundations required for re-thinking what is needed to support learners to identify with, invest in, and become powerful knowers, doers, and generators of mathematics; and 3) an initial cohort of 10 early career EMERG scholars chosen for their potential to propose and carry out cutting edge research and their willingness to have their initial project proposals refined through interaction with the EMERG collective.

This call details the expectations and evaluation criteria reviewers will use to evaluate the EMERG Scholar applications.

A major goal of the EMERG Program is to create a robust and evolving conceptual framework to guide research in mathematics education focused on supporting equitable and ambitious mathematical experiences¹ for students from historically underserved communities. For the purpose of the EMERG Program, the focal students and communities include African-American, Latine, Indigenous communities and those experiencing persistent inter-generational poverty.² A large percentage of learners' mathematical experiences take place in classrooms, and classrooms are likely to be one of the settings for research projects. However, what learners bring to those classrooms arises from the complex interaction of individual, familial, cultural, social, and political experiences and systems; those experiences and systems are also potentially rich subjects for investigation.

Our intention is to try to address such complexities head on, as a collective. Here is an illustrative example related to learning and identity formation.

Given that a huge amount of mathematics learning and identity formation takes place in classrooms, it is reasonable to think of the creation and documentation of ambitious and equitable instruction as a potential focus for research. We note, however, that there are many other contexts in which such learning and identity formation take place. To give a

¹ We use the phrase "ambitious and equitable experiences" as a shorthand to denote the broad space of inquiry for EMERG projects and discussion. Please see [Collective Understandings](#) for a more extended discussion of this phrase.

² Interrogation of the role of culture in learning includes critically examining how inter-generational ethnic communities define themselves. This work includes examining the underpinnings of how community labels evolve. As above, please see [Collective Understandings](#) for a deeper discussion.

few examples: multidisciplinary studies of the development of mathematical identity outside of school, workplace studies, informal learning environments, studies of the affordances of informal and home language, and attempts to bridge from out-of-school settings to learning in classrooms are all possibilities for research proposals. Indeed, addressing issues of learning and identity formation in classrooms might well call for triangulating insights and findings from studies of different types (e.g., analyses of classroom norms and discourse practices, analyses of small group interactions, participant interviews, student biographical histories, etc.) These, in turn, may call for a range of research methods drawn from different disciplines, or for emerging interdisciplinary paradigms and methods. Our intention is to problematize many extant perspectives and to build on current efforts, e.g., studies of identity and race, within and outside mathematics education.

The EMERG community will reflect collectively on its ongoing work, including the research projects of the EMERG Scholars, as that research is planned and as it takes place. Senior researchers and practitioners will both advise and learn alongside early career scholars. This learning community will develop and interrogate a broader conception of what contributes to robust learning in mathematics, drawing on emergent findings from rigorous and analytic work that informs our understanding of human learning and development. A distinctive feature of the EMERG community is that the senior advisors contribute to the work of the early career scholars. Presentations by EMERG Scholars at meetings of the EMERG community will be more interactive than typical formal presentations at other meetings, with the explicit intention of enhancing the work of those scholars as it evolves. Members of the Gates Foundation K-12 Math Strategy team hope to learn from these conversations as well.

EMERG Scholars will thus have multiple layers of support: 1) they will identify individual mentors; 2) once their projects are approved (in collaboration with the EMERG Executive Board) a small number of additional advisors who can be available for consultation will be selected; 3) the entire EMERG community will, at ongoing meetings, discuss underlying theoretical and methodological issues as well as issues raised by EMERG Scholars' projects. The goal of these meetings will be to enhance individual projects as well as our collective understandings. We want to better understand the needs of the communities where projects take place so we can better conceptualize those needs and work to address them.

Applications for the EMERG Program will thus have three major components:

1. A personal statement that explains and documents the candidate's commitment to issues of ambitious and equitable engagement with mathematics, especially for students from traditionally underserved populations (African-American, Latine, and Indigenous Peoples) and from communities experiencing persistent inter-generational poverty; their personal history of work (including research and practice) in the area, and their willingness to participate in the EMERG intellectual community and to have their work-in-progress evolve as a result.
2. A preliminary proposal indicating the research the EMERG Scholar hopes to carry out. The proposal should characterize the arena and context for the intended project, its focus and the questions addressed, why the project matters, why it is feasible, and how the research project could be designed methodologically. *Again, it is expected that the proposed work will be refined in interaction with the EMERG community.*
3. Letters from two senior academics and/or practitioners describing the importance

of the research focus, the quality of the preliminary proposal, and the potential of the candidate to be a productive, interactive, reflective, and collaborative member of the EMERG community. One of the letter writers may be the candidate's potential mentor.

Program Overview

With generous funding from the Bill and Melinda Gates Foundation (BMGF), the National Academy of Education is delighted to announce a pilot program of ten early career research grants for those within seven years of obtaining the Ph.D. or equivalent. The goal of the Equity in Math Education Research Grants (EMERG) Program is to build a powerful research community that focuses on successful mathematics learning and participation for learners who face systemic challenges. We are seeking to support programs of research focused on creating robust learning environments that support deep conceptual mathematical reasoning for populations who have historically not had access to such opportunities. These include learners from traditionally underserved communities (African-American, Latine, Indigenous communities) and from communities experiencing persistent inter-generational poverty.

The program will award up to 10 grants of \$113,000 each, including 10% overhead for EMERG Scholars' institutions, to be used over a period of two years. The awards will be made as subgrants to the principal investigator's institution, with the applicant serving as principal investigator. These early career scholars will become part of a community of emergent, mid-career and senior researchers collaborating on key issues related to research and development on equitable and ambitious mathematics experiences for these learner populations.

Applications are encouraged from members of under-represented groups. We welcome applications from scholars who work in a variety of disciplines including but not limited to education, anthropology, human development, psychology, sociology, education policy, teacher education, bilingual education, and assessment.

Guided by an Executive Board of senior researchers and practitioners, the program will support early career scholars that promise to make significant contributions to research and practice that focuses on understanding, supporting, and improving the long-term mathematical experiences of these specific populations. The network of researchers, including the early career scholars, Executive Board, and a large interdisciplinary Advisory Committee with relevant expertise will form a vibrant intellectual community, whose interactions will serve to advance the field, and the work of all of those who participate in it, as well as support the communities served by the research.

In collaboration with the Executive Board and Advisory Committee, the EMERG Scholars will participate in the design of a conceptual framework focused on improving our current knowledge of how students from those communities achieve mathematical "proficiency," broadly conceived, with attention to understanding, motivation, engagement, persistence and identity. While addressing students' content knowledge and participation in disciplinary practices, the proposed framework will also move the field forward in addressing students' mathematical agency and intersectional identities, including:

- whether learners, their peers, teachers, and others in their learning environments (including home, community, and school) position them as being able participate in mathematical activity;
- whether and how different actors in participants' learning environments see and shape their lives and futures, including any aspects of mathematical activity within and across settings;
- the systemic and structural issues in school, classroom, or informal environments that foster or constrain mathematical participation, learning, and identities.

Aspects such as how others position participants³ with regard to intersectional identities (e.g. race, ethnicity, gender, and language), whether and how students' everyday language repertoires are taken up during mathematics instruction, how multiple dimensions of students' identities are made available and taken up, and how these positionings, repertoires and dimensions of identities interrelate and intersect with other ascribed statuses, will be central issues to be addressed by the framework.

Program Goals

The EMERG Program supports scholars whose research focuses on deep mathematics learning and participation for students from traditionally underserved communities. This research grant funds proposals that will inform the BMGF's [K-12 Education](#) long-term strategy. The primary goals of this program are to:

1. Support the professional development of a cadre of early career scholars whose research focuses on fostering successful mathematics learning, development, and participation for historically underserved students from African American, Latine, Indigenous, and low-income communities.
2. Cultivate a community of emergent, mid-career, and senior scholars who will usher in new approaches to mathematics education research that will lead to fundamental transformations in the experiences of target learner communities.
3. Develop a conceptual framework that guides future research and leads to forms of mathematics education that are worthy of all students but especially those that have been underserved by existing structures.
4. Strengthen the evidence informing the [BMGF K-12 strategy](#) for supporting mathematics learning for learners from these communities, through both individual EMERG Scholars' projects and the full community's conceptual framework.

³ We use the term participants as there are many activities outside of school settings in which mathematical reasoning is embedded such as buying, selling, playing games, etc.

Eligibility

- Only individual applications will be accepted. Applicants must apply through their institution's sponsored programs office.⁴
- Applicants must have received their PhD, EdD, or equivalent after January 1, 2016. Tenured and non-tenured candidates may apply.
- Applications are encouraged from scholars with shared racial, ethnic, language, and/or cultural backgrounds with target communities and populations. Additionally, applicants should have demonstrated commitment to the learning, development, and participation of learners in African American, Latine, Indigenous, or low-income communities, as well as experience working with them, either as a researcher and/or a practitioner.
- The proposed project must be a research project.
- Applicants must be affiliated with a university or research center in the United States.
- Applicants may not be employees of the BMGF or the NAEd.

Awards

- Each research grant will be in the amount of approximately \$113,000, which includes 10% indirect costs for a two-year period beginning in Fall 2024. Awards will be made as subcontracts between the applicant's institution and the NAEd over two disbursements.
- The research grant also includes approximately \$2,000 in funds to use toward airfare travel to four in-person convenings, where scholars will participate in individual and group mentoring toward strengthening their individual projects and long-term research agenda. They will also discuss ongoing work with the EMERG Executive Board and Gates Foundation staff.
- The research grant includes approximately \$100,000 in funds to use for research expenses, including but not limited to the following: purchase of data sets, travel to research locations, participant stipends, technology expenses, and research assistance stipends.
- EMERG Scholars will not be required to take leave from their teaching and administrative responsibilities; however, they may choose to use project funds to negotiate a reduced workload or full time away from teaching or administrative responsibilities, assuming they receive institutional approval.
- Institutions may not charge more than 10% in indirect costs on these grants.
- For projects involving human subjects, Principal Investigators must receive approval for their project from a human subjects review board prior to release of funds.

Important Dates (*subject to change*):

- **September 28th, 2023:** Deadline for Applications
- **October/November 2023:** Applicant interviews
- **December 2023:** EMERG Scholars selected and announced.
- **June 2024/September 2024:** First award payment disbursed to institution.
- **June 2025/September 2025:** Second award payment disbursed to institution.
- **June 2026:** Grant Concludes.

⁴ If an applicant applies from an organization without a sponsored programs office, they may opt to get approval through the sponsored programs office at their graduate institution.

In-Person Convenings:

The EMERG Scholars, Executive Board, and select Advisory Committee members will meet in person to amplify research plans (revise tools, methods, literature) and refine the conceptual framework with insights from scholars' projects.

- **March 6-8, 2024**, Washington, DC
- **November 6-8, 2024**, Washington, DC
- **Fall 2025** (dates TBD), Washington, DC
- **June 2026** (dates and location TBD)

Additional Convenings (*subject to change*):

Suggested Frequency	Activity	Activity
Initial	Individual Mentoring	Each EMERG Scholar is paired ⁵ with one mentor with expertise in their topic to support them throughout the program
Monthly	Individual Mentoring	Each EMERG Scholar checks in with their mentor (via email or Zoom)
Three Times/Year	Group Advising	Each EMERG Scholar will meet with a team of two-three interdisciplinary advisors for a group mentoring session (via email or Zoom)
As Needed	Peer-Mentoring Clusters	At in-person meetings, EMERG Scholars will self-select into smaller peer mentoring clusters based on their project themes. (Scholars will determine their own schedules for peer-mentoring clusters with support from NAEd staff and Executive Board members.)
Twice/Year (Once in-person, once virtual, with informal contact throughout process)	Full-Group Convening	The entire EMERG community will convene for a collective meeting to discuss where we are, theoretical framing, and project updates from scholars.

⁵ Each candidate will submit two reference letters with the application. If possible and appropriate, candidates should consider one of their letter writers to serve as their EMERG program mentor, which allows both to join the EMERG community.

Application Components

All uploaded documents must be submitted in PDF format.

- **Information on the PI:** Contact information, institutional affiliation, certification of PI eligibility
- **Current Curriculum Vitae:** While there is no required format for the CV, it must include the following components:
 - Publications
 - Presentations (only at professional and/or research conferences)
 - Funded grants
 - Dissertation title and committee
 - Service
 - Experiences relevant to your application
- **Institutional letter of Commitment:** A Letter of Commitment (LOC) signed by an authorized institutional representative. This letter will certify the eligibility of the Principal Investigator and confirm the cooperating institution's authorization of the submitted proposal and intent to enter into a subaward arrangement with the National Academy of Education.
- **Project Description/Narrative (limited to 10 double-spaced pages, 11-point font):** A preliminary proposal indicating the work the PI hopes to carry out, including the following:
 - Problem description/policy issue to be addressed
 - [Preliminary] Theoretical or conceptual framework for the research
 - Brief review of relevant research/policy literature
 - Research questions to examine, hypotheses to be tested
 - Statement on how this work could contribute to the larger field of education research (Is the work filling a void or creating a new lane? Does it represent a break with tradition in some way? Is it disruptive (in a good way)?
 - [Preliminary] Description of study methodology, including any data to be collected and associated data collection and analysis strategies; rationale for how the data to be gathered addresses the fundamental research objective.

Please understand that project descriptions can include "preliminary" elements and are expected to evolve as the EMERG research community takes shape, grapples with the issues raised by the proposals, and develops conceptual approaches.

- **Personal Statement (limited to 2 double-spaced pages, 11-point font):** Provide a career statement narrative, describing the following:
 - What led the applicant to their current role and interest in math education research, including personal work history (both research and practice). Applicants should indicate future professional plans and how the proposed research contributes to long-term professional goals.
 - The candidate's commitment to issues of ambitious and equitable engagement with mathematics, especially for students from African-American, Latine, and Indigenous Peoples communities and from communities experiencing persistent inter-generational poverty.
 - Candidate's willingness to participate in the EMERG intellectual community and to have their work-in-progress evolve as a result.

- **References:** Applicants will be required to list two references who can speak to the applicant's promise as a scholar in the field of math education and the strength of the preliminary project proposal. *One of these references could serve as one of the EMERG scholar's mentors. If so, please indicate so in the application.* Additionally, references should demonstrate how the candidate will be a productive, interactive, reflective, and collaborative member of the EMERG community.
- **Example of Past Research Relevant to Math Education:** Provide an example of a previous research project that demonstrates the applicant's promise as a researcher in the field of math education and ability to complete the proposed project. Applicants may submit a **chapter** of a book or dissertation, an article, or other research, and the writing sample may be published or unpublished.
- **Budget proposal:** Template provided within the application portal.
- **Current Commitments:** A list of current and pending commitments on sponsored research projects.

Evaluation Criteria

Applications will be reviewed by NAEd members and other senior scholars with expertise in relevant areas. As a reminder, candidates are applying to be part of a *learning process*, and their proposed projects will be refined with support from the EMERG community. As such, proposals will be evaluated on the following:

- Intellectual rigor of the proposed project
- Compelling nature/significance of the research question(s)
- Intellectual breadth, depth, and richness of the project – does this project consider other disciplines?
- Intellectual humility – will this candidate be willing to heed advice and support from other members of the EMERG community, with the understanding that the actual project could look different than the initial proposal?
- Contribution to the greater EMERG community – we are looking to fund a cohort of scholars focusing on diverse settings, locations, disciplines, and methods.

Additionally, reviewers will consider the applicant's past research record, career trajectory, and commitment to the field of education research. We will award 10 research grants to begin during the 2024-2025 academic year.

Semi-finalist applicants may be asked to interview with members of the EMERG Executive Board.

How to Apply

Proposals must be submitted electronically through the online application available on the [NAEd website](#) beginning in mid-June 2023. Applicants should carefully read all instructions prior to starting the online submission process.

- All applications must use 11-point Times New Roman font, double-spaced with one-inch margins. Do not reduce your font size—reviewers must be able to read all documents.
- All applications and documents must be submitted in English.
- All uploaded documents must be in PDF format. (NAEd staff will not support any document conversion to PDF.)
- Do not include cover letters, a table of contents, or any additional materials.

Deadlines

All application materials, including letters of reference, are due by 8:00pm EDT on September 28th, 2023.

Contact Information

The NAEd will host information sessions on the following dates:

July 12, 2023, 2:00pm EDT: [Register](#)

August 21, 2023, 2:00pm EDT: [Register](#)

Please contact Abigail Bell with any questions:

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More details are available on the [EMERG Website](#).