Science of Teaching
Numeracy Expert: Public Goods Curation and Development Support

Call for Expressions of Interest (EOI)

Date: May 12th, 2023

Summary

RTI International is seeking 2-3 early grade numeracy instruction experts to support the Bill & Melinda Gates Foundation (BMGF)-funded Science of Teaching (SoT) Numeracy Agenda. Science of Teaching—a 4.5 year program focused on foundational literacy and numeracy—has an ambitious 18-month numeracy agenda comprising three different streams of work: (1) Developing and curating public goods on early grade numeracy instruction; (2) Conducting research on early grade numeracy; and (3) Launching the SoT Community of Practice. SoT has already started on this work and will convene a Numeracy Resource Development workshop in July 2023 followed by a fast-paced timeline for the development of public goods and a research agenda. SoT is soliciting early grade numeracy instruction experts who can support various aspects of this 18-month initiative.

Consultants will be asked to focus their support on one of the three areas listed below. This EOI provides an example scope of work for Area number 1, which is the most immediate. However, SoT encourages experts interested in supporting Areas 2 & 3 to also respond to this EOI.

1. Area #1 Early Grade Numeracy Public Goods Development (focus for this Scope of Work).
2. Area #2: Research on Early Grade Numeracy Instruction (a brief overview is provided below).
3. Area #3 Development of the Global Early Grade Numeracy Community of Practice (a brief overview is provided below).

Science of Teaching Grant Background

Improving foundational literacy and numeracy (FLN) is essential for low- and middle-income countries to provide basic education of adequate quality for their citizenry. Learning outcomes are presently so low in primary education that business as usual investments will not be sufficient to ensure needed gains in achievement. The World Bank, DFID, and UNICEF are among the donors developing new initiatives to respond to this learning crisis. Low- and middle-income countries in sub-Saharan Africa and South Asia are at the forefront of this learning crisis, and the World Bank’s Learning Poverty Accelerator countries are particularly in need. Education officers and counterpart education policymakers developing, implementing, and managing programs focused on FLN must have vastly improved technical understanding of how to design and manage these interventions. Governments and their funding partners have recently increased their investments in improving FLN, with many pilot interventions as well as several large-scale initiatives. Of paramount concern is how to help decision-makers allocate the resources being funneled into such initiatives into evidence-based approaches.

RTI International is currently implementing the Bill and Melinda Gates Foundation-funded grant to improve knowledge of best FLN practices at-scale and access to this body of research. The Science of Teaching grant is focused on the following activities:
1. **Synthesize** existing research on FLN at-scale by developing user-friendly materials on six to-be-determined topics (one topic, Structured Pedagogy, is already determined).
2. **Generate** new research to expand the evidence-base of FLN.
3. **Disseminate** research and synthesis documents through a variety of mediums including through provision of technical assistance to ministries of education, donors and implementing partners.

**Scope of Work**

**Area #1: Early Grade Numeracy Public Goods Development**

**Introduction:**

Two themes cut across all discussion of public goods: (1) the curation of existing resources and models; (2) the incorporation and consideration of information and communications technology (ICT).

1) **Curation of existing resources.** There are many resources, reports, samples, etc. that have already been developed, many of which are available on the internet. Ensuring quality and making them easy to find and use, however, remains a challenge. As such, it will be important to ensure that public goods developed under SoT include and build upon existing resources – i.e., avoiding “reinventing the wheel” but rather making the existing “wheel” easier to find and use.

2) **Incorporation/Consideration of ICT.** ICT solutions offer important opportunities, which cut across the areas of interest. While high-tech ICT solutions are not necessarily appropriate in every context, it is key to ensure that the public goods incorporate possible ICT solutions that add value, while also offering low-technology resources. SoT will work with organizations in education technology to identify and share innovative solutions for delivering content (including the curated resources) when appropriate.

The process of public good development will begin with identification of existing materials that could either be incorporated as is or incorporated with some modification. The consultant(s) will collaborate with both digital content and numeracy experts to create an online repository of content that is easy to access and use.

**Specific tasks for Area #1 may include but are not limited to:**

1. **Curation of Numeracy Public Goods (May-July 2023)**
   - This is an ongoing task that will begin immediately as desk research and will be informed by the Numeracy Resource Development Workshop in July.
   - Collect existing numeracy resources through internet searching as well as through solicitation among numeracy professionals in the burgeoning numeracy community of practice.
   - Resources will be vetted by the consultant and SoT Numeracy team to then be compiled in preparation for the July Numeracy Workshop.
   - Work with SoT Numeracy team to identify numeracy working group experts for July Numeracy Workshop.
   - Refine numeracy resource inputs from numeracy instruction experts, identify primary public goods to be targeted.

2. **Coordinate and contribute to the Numeracy Resource Development workshop (July 2023)**
• The workshop will bring together working groups for three days for intensive development. It is anticipated that each working group will include 4-5 early grade numeracy education experts, facilitated by the SoT team (including consultant(s)).

• Minimum expected outputs from this workshop include: a framework for each set of public goods; detailed outlines, including plan for print/digital access; review and selection of models/examples if/as relevant; indicative draft content (i.e., examples of exercises for teacher professional development, examples of guidance to include with a compilation of model lessons plans, resources related to practical application of assessment-informed instruction).

• Prior to the workshop, the consultant will be asked to:
  o Support the preparation of the workshop through outreach to participating early grade numeracy education experts and supporting the identification of public goods resources that could either be incorporated as is or incorporated with some modification. These resources will be utilized at the workshop and will become a part of broader curation effort (i.e., reports, samples, educational materials examples, existing frameworks, etc.).

• During the workshop, the consultant will be asked to:
  o Facilitate and participate in activities and discussions that will inform the development of public goods.
  o Work with the SoT team to ensure the fluidity of the workshop.

• Following the workshop, the consultant will be asked to:
  o Consolidate workshop output: Detailed frameworks, outline, and content for each targeted set of public goods. Share out a summary of the workshop which includes action items and consolidation of expert feedback.
  o Work with the SoT team in finalizing the draft public goods. This will involve coordinating with working group and contributing to finalization of public goods.

3. Development of public goods (August-October 2023)

• Continue work on the development of the products targeted, based on the frameworks developed during the July workshop (both drawing from goods curated and creating new content when necessary).

• A full draft will be produced in collaboration with the working group. At the same time, SoT will identify intervention partners that are willing to pilot/field-test the public.

4. Assist in identifying partner organizations for field testing of the public goods (October-December 2023)

5. Support the finalization of the public goods based upon field-testing (January 2024)

Area #1: Anticipated Deliverables

• Mathematics resource development/review tools/checklist.
• Brief biweekly updates (bullet points on activities and progress).
• Mathematics public goods review summary findings/report draft and final versions (that include an overview of the quality assurance process).
• Other deliverables may be included upon discussion and agreement between RTI and consultant.
Area #2: Research on Early Grade Numeracy Instruction

Introduction:

While there is now more extensive knowledge on how to teach literacy, evidence on how to teach numeracy lags behind. More information is needed surrounding effective principles of mathematics teaching as well as a deepening of understanding on how to best support teachers to effectively teach both literacy and numeracy. The purpose of Area #2 is to focus on research questions in the field of numeracy that will fill gaps in knowledge about numeracy pedagogy in low and middle-income contexts and link to the public goods being development under Area #1.

Specific tasks for Area #2 may include but are not limited to:

- Work with SoT Numeracy Team to develop a call for research proposals
- Participate in selection of research projects, based on proposals submitted
- Assist in providing research technical assistance, as needed/appropriate, and undertaking quality assurance of research deliverables.

Deliverables under Area #2 will be specified upon discussion and agreement between RTI and consultant.

Area #3: Development and Coordination of Global Early Grade Numeracy Community of Practice

Introduction:

The development of a global community of practice in early grade numeracy will seek to improve the quality of pedagogical discourse and implementation. This will in turn further amplify SoT’s focus area of syntheses of documents and dissemination of research to the broader global early grade education community.

Specific tasks for Area #3 may include but are not limited to:

1. Create/expand roster of numeracy experts
   - Work with SoT Numeracy Team to identify and initiate communications with a diverse range of experts in numeracy to be included in a global early grade numeracy community of practice.
   - Develop and keep up-to-date a roster including names, contact information, organization, role, area of expertise, etc.

2. Organize a series of Numeracy Global Community of Practice meetings and webinars with identified experts
   - Solicit ideas for discussion topics from CoP participants
   - Plan meeting/webinar times and coordinate speakers/presenters
   - Lead discussions in collaboration with SoT
   - Share recordings and any output for posting on SoT website and to CoP.

Deliverables under Area #3 will be specified upon discussion and agreement between RTI and consultant.
### Estimated Level of Effort

<table>
<thead>
<tr>
<th>Area #1 Consultant Activities</th>
<th>Estimated Level of Effort</th>
<th>Anticipated Timeline (dates are subject to change)</th>
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</thead>
<tbody>
<tr>
<td>Task 1: Curate Numeracy Public Goods and Prepare for Workshop.</td>
<td>8 days</td>
<td>o/a May 18th – July 2023</td>
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<tr>
<td>Task 2: Coordinate and contribute to the Numeracy Resource Development workshop.</td>
<td>3 days</td>
<td>July 2023</td>
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<td>Task 3: Development of public goods.</td>
<td>10 days</td>
<td>August-October 2023</td>
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<td>Task 4: Assist in identifying partner organizations for field testing of the public goods.</td>
<td>3 days</td>
<td>October-December 2023</td>
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<td>Task 5: Support the finalization of the public goods based upon field-testing.</td>
<td>5 days</td>
<td>January-February 2024</td>
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<tr>
<th>Area #2 Consultant Activities</th>
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<tr>
<td>Task 1: Work with SoT Numeracy Team to develop a call for research proposals.</td>
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<td>Task 2: Participate in selection of research projects, based on proposals submitted.</td>
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* We will be hiring 1-3 consultants to support this effort. Levels of effort will reflect agreed upon timelines.

### Period of Performance

Varying (Immediate – February 2024)
Submission and Evaluation Process

Please submit all questions to FLN@rti.org no later than May 20th, 2023.

Please submit a current CV, proposed daily rate, and cover letter which clearly describes relevant early grade numeracy experience, states which area(s) of technical assistance you wish to be considered for, and the general period of availability for this work via email to FLN@rti.org no later than May 26th, 2023.

The Science of Teaching evaluation committee will review submissions on an on-going basis. As specific tasks related to the numeracy scope are identified, the Science of Teaching team will reach out to candidates with relevant expertise for further interviews and discussions to move forward with consultant engagement. All qualified applicants will receive consideration for contracting without regard to race, colour, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.