

Bracket 1

Entrant Information

I am submitting this entry as:

an individual entrant

Big Idea Information

Title of your Big Idea

role of NSF in funding education

Upload an image to represent your Big Idea or your team.

How much of the NSF funded fundamental scientific educational research is really fundamental?

What is Science?



<https://skild-prod.s3.amazonaws.com/nsfideamachine/uploads/9136794696351-team138557-entry124655-section63687-nsf.jpg>

What are your scientific or engineering research interests or areas of expertise?

teaching mathematics and physics; teacher professional development

What is the compelling question or challenge?

NSF does not fund science of education but social projects in the field, despite the mission (advancing science).

What do we know now about this Big Idea and what are the key research questions we need to address?

NSF does not know about this issue (or ignore it), but could start from reading this paper: "How much of the NSF funded fundamental scientific educational research is really fundamental?" at <http://www.cognisity.how/2016/12/NSF.html>

For example, NSF would never finance building a road or a bridge. Instead, NSF would finance study on the properties of different materials used for building roads or bridges. The same approach must be applied to the field of education. But in education NSF keeps funding "roads building".

Why does it matter? What scientific discoveries, innovations, and desired societal outcomes might result from investment in this area?

Because a science of education does not exist but NSF does not help to develop it. NSF helps to improve specific educational practices here and there. There is no strategic plan for advancing

SCIENCE of education.

If we invest in this area, what would success look like?

Developed science of education would greatly advance educational practices (akin physics → engineering)

Why is this the right time to invest in this area?

Because education reform badly needs science of education

Please give us three key words describing the Big Idea.

Paradigm change, science of education

Publication/Citation References (optional)

In the boxes below, you may list up to 3 publication/citation references, either by text or link.

Reference #1

"How much of the NSF funded fundamental scientific educational research is really fundamental?"

Reference #1 URL

<http://www.cognisity.how/2016/12/NSF.html>

Reference #2

"Critical Reading of "Making Sense of Confusion" by Jason E. Dowd, Ives Araujo, and Eric Mazur"

Reference #2 URL

<http://www.cognisity.how/2018/02/Mazur.html>

Reference #3

Perimeter Institute for Learning and Teaching

Reference #3 URL

<http://www.cognisity.how/2017/11/PILT.html>

Agreements and Validations

I consent to NSF's use and display of the submitted information and contestants' names and likenesses.

I agree

I confirm that all individual, teacher, and team entrants meet the age and citizenship/residence requirements, and agree to abide by all rules of the NSF 2026 Idea Machine as described in the

https://www.nsf.gov/news/special_reports/nsf2026ideamachine/eligibilityandrules.jsp

[rel="nofollow">eligibility criteria and rules](#)

.

I agree

Forms and Releases

All individual and team entrants must be at least 14 years of age as of September 1, 2018.

Individuals: If you are under 18 years of age, please upload a completed parental/guardian permission form (located in the Quick Links to your left) here.

Team leaders: Please collect the signed parental/guardian permission form for any team members younger than 18 years of age (including yourself) and combine them into one document to be uploaded here.

Teachers entering on behalf of high school classes are not required to submit parental/guardian forms on behalf of their classes.