NISE Net Online Workshop

Evaluating Educational Experiences During Times of Limited Social Interactions - Adventures in Team-Based Inquiry

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Today's Presenters:

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Welcome!

As we wait to get started with today's discussion, please:

Introduce yourself! Type your name, institution, and location into the Chat Box

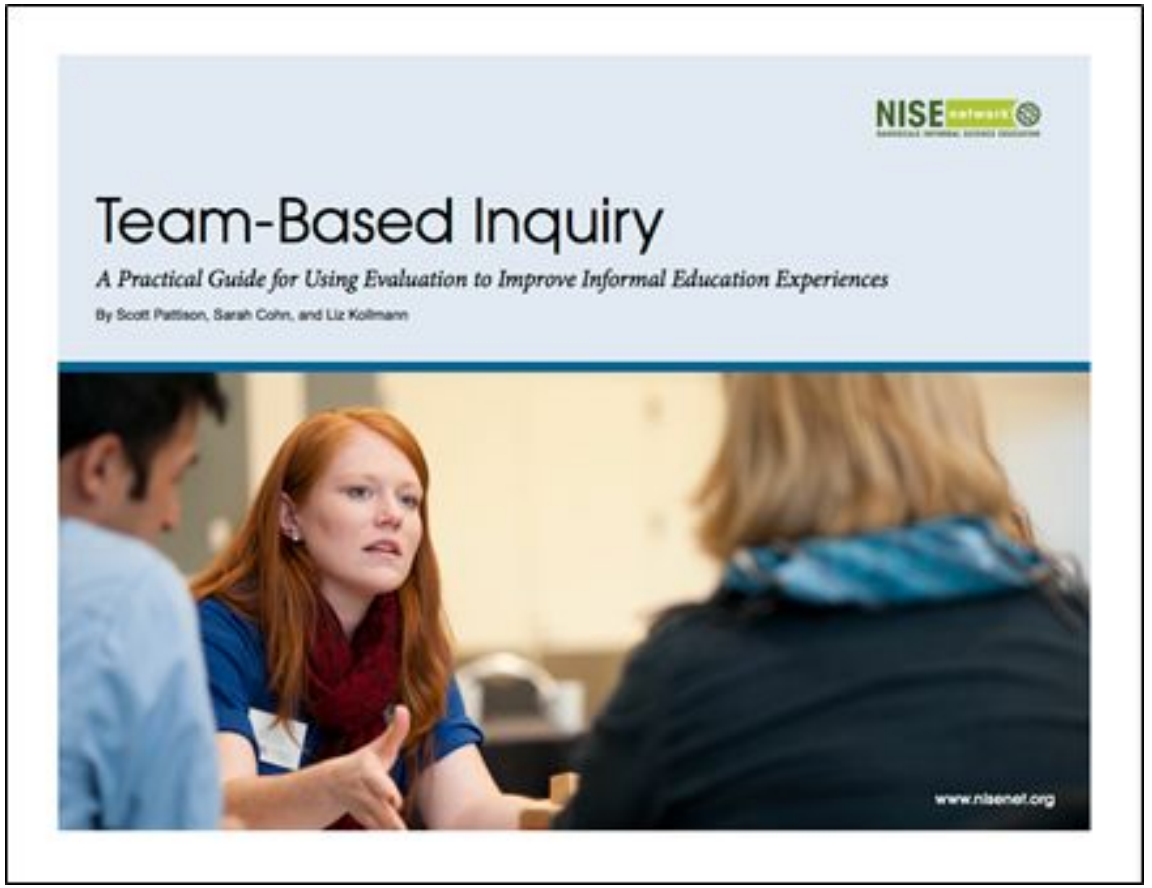
Questions? Feel free to type your questions into the Chat Box at any time throughout the webinar or use the raise your hand function in the participants list and we'll unmute your microphone.

Today's discussion will be recorded and shared on nisenet.org at: nisenet.org/events/online-workshop

TEAM-BASED INQUIRY

Team-Based Inquiry

An approach to empower professionals to get the data they need, when they need it, in order to improve their products and practices and create successful educational experiences.



Team-Based Inquiry

TBI can help you to:

- Improve educational products, experiences, and practices
- Build your skills and capacity to conduct inquiry and evaluation
- Foster effective teams and organizations

Team-Based Inquiry

- Systematic
- Led by non-evaluation professionals
- Collaborative and team based
- Small scale and focused
- Embedded in work

TBI vs. Evaluation

When is TBI a good approach and when is a full evaluation more appropriate?

TBI

- You want to improve your own practice
- You need timely data to make decisions about a project
- Your priority is reaching shared understanding with your team and building skills

Evaluation

- You are accountable to an outside agency
- You are making high-risk, high-cost decisions
- Your priority is generating accurate, generalizable findings

Description of TBI Stages

Phase 1: Question

How can this activity / practice be improved?

Collect data to answer the question.

Review data to identify common patterns.

Brainstorm, prioritize, and implement solutions.

Phase 2: Investigate

Brainstorm, prioritize, and implement solutions.

How can this activity / practice be improved?

Review data to identify common patterns.

Collect data to answer the question.

Phase 2: Investigate

Phase 3: Reflect

Brainstorm, prioritize, and implement solutions.

How can this activity / practice be improved?

Review data to identify common patterns.

Collect data to answer the question.

Phase 4: Improve

Brainstorm, prioritize, and implement solutions.

How can this activity / practice be improved?

Review data to identify common patterns.

Collect data to answer the question.

Reporting

Question: *What we hoped to learn and why it was important*

Investigate: *How we answered our questions*

Reflect: *What we found out*

Improve: *How we changed our practice*

TBI FROM A PRACTITIONER'S PERSPECTIVE

STEM Storytime Program

Big idea: There are things that are too small for us to sense with just our eyes.

- ★ Children and caregivers listen to the Dr. Seuss story, "Horton Hears a Who"
- ★ Following the story, they do hands-on activities, such as smell scents and using magnifying sheets to see tiny things

https://www.nisenet.org/catalog/horton-senses-something-small

STEM Storytime Program

- QUESTION: Does the program engage young children? How can it be improved?
- INVESTIGATE: We observed children at the program four times. We also interviewed caregivers to get ideas for how to improve the program.

STEM Storytime Program

- REFLECT: We observed that children got fidgety during the story. Caregivers told us it was too long to hold their attention. We also observed that some of the activity materials were difficult to use with groups of small children. Caregivers thought the children liked the activities.

- IMPROVE: We shortened the story by skipping some parts and encouraged the children to participate by acting along with Horton (e.g. holding their hands up to their ears to listen closely). We substituted other materials (e.g. squeeze bottles instead of scent-filled balloons).

Tips for TBI

- QUESTION: It's very important to have a question that you can answer and you can act on. It will save time in the end to really think through your question.
- INVESTIGATE: Focus on collecting the data you need to answer your question (and not other data). Simple data collection methods are often best.
- REFLECT: TBI is about being systematic, so go through the process of looking for patterns in your data. Avoid the temptation of jumping straight to solutions.
- IMPROVE: Brainstorm ways to improve the program, and test it again. You might keep the same questions, or come up with new ones

TBI IN ACTION: THE "SORT IT OUT" EXHIBIT

Try "Sort It Out"

Take 5 minutes to:

- Try the "Sort It Out" virtual exhibit: https://virtualexhibits.mos.org/sort-it-out/
- Brainstorm potential TBI questions for this virtual exhibit and share them in the chat

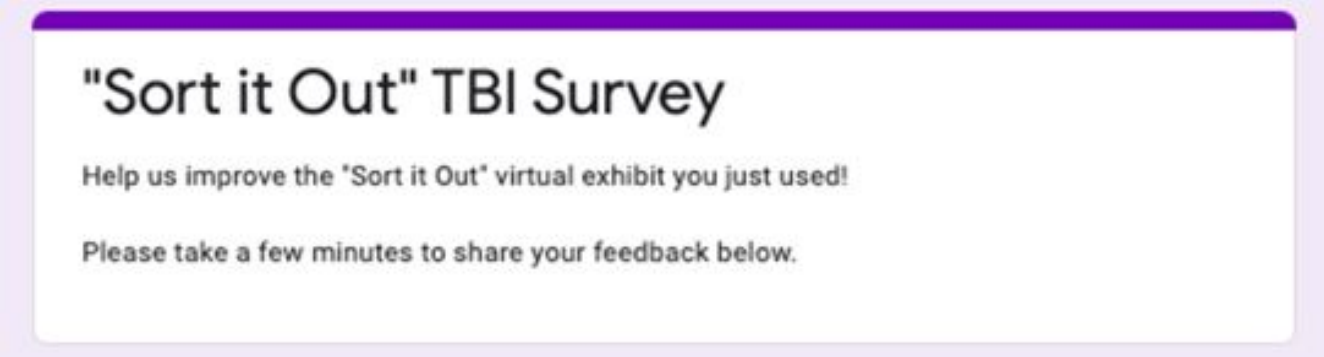
Phase 1: Question

Inquiry question	What information would you need?	How could you get that information?	What changes might you make?
In what ways is the activity supporting visitors to practice the intended sorting skills?	Do visitors demonstrate sorting skills? Do they recognize that the activity is about sorting?	Observation (either in-person or via screen share) and survey or interview responses.	Changing the title, exhibit description, or instructions; adjusting the objects available to sort.

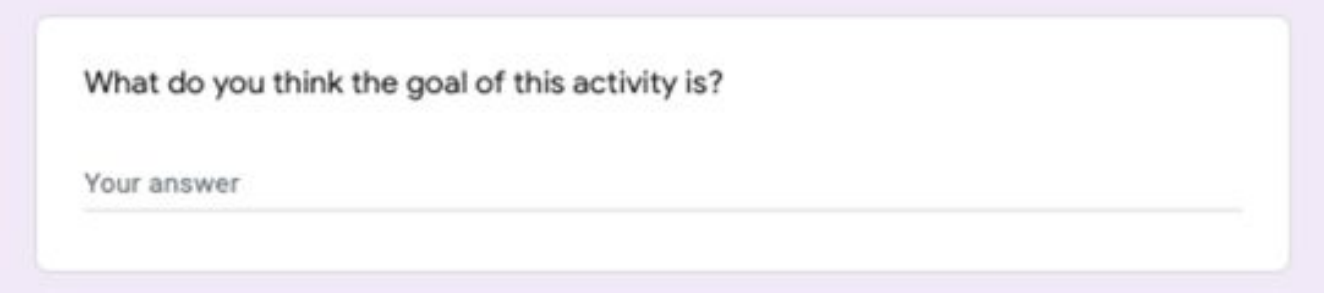
Phase 2: Investigate

Inquiry question	What information would you need?	How could you get that information?	What changes might you make?
In what ways is the activity supporting visitors to practice the intended sorting skills?	Do visitors demonstrate sorting skills? Do they recognize that the activity is about sorting?	Observation (either in-person or via screen share) and survey or interview responses.	Changing the title, exhibit description, or instructions; adjusting the objects available to sort.

Phase 2: Investigate

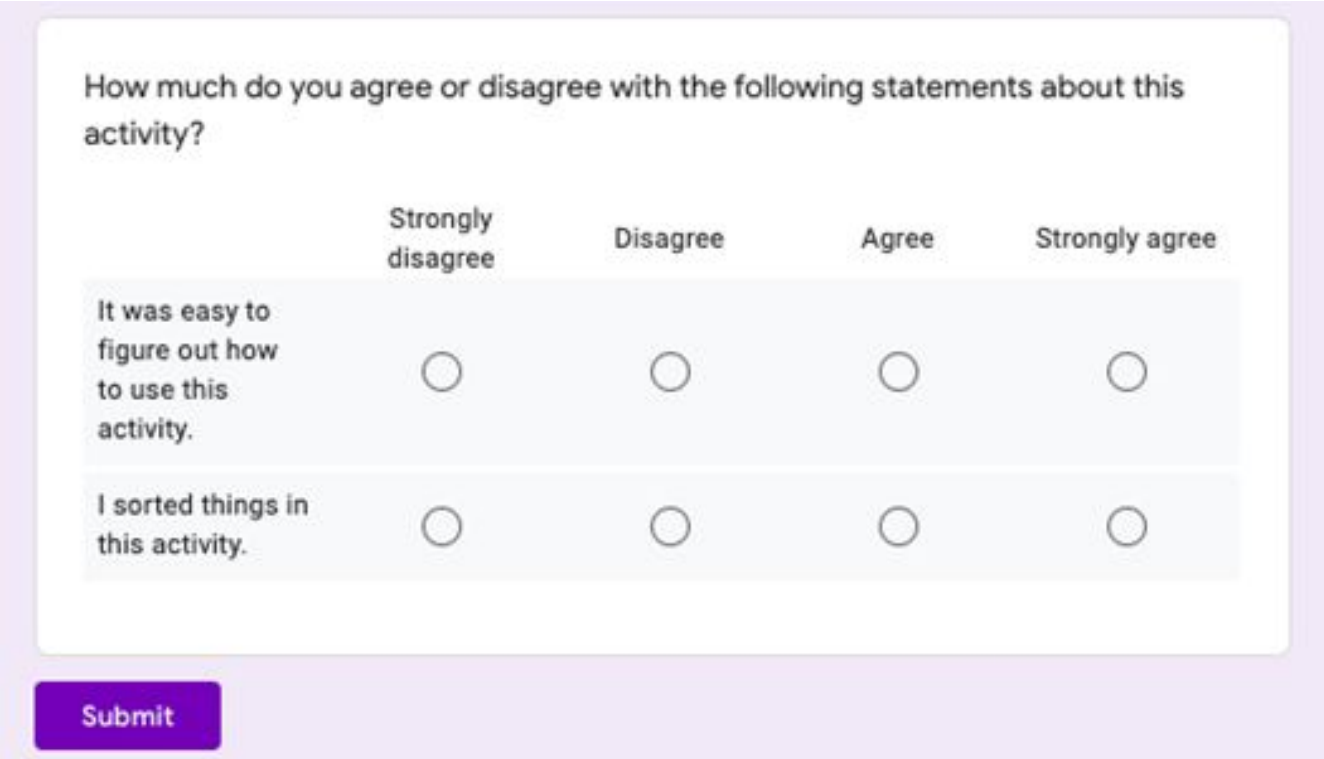


Include a title and short introduction



In what ways is the activity supporting visitors to practice the intended sorting skills?

Phase 2: Investigate



How much do you agree or disagree with the following statements about this activity?

	Strongly disagree	Disagree	Agree	Strongly agree
It was easy to figure out how to use this activity.	○	○	○	○
I sorted things in this activity.	○	○	○	○

Submit

TBI Question
In what ways is the activity supporting visitors to practice the intended sorting skills?

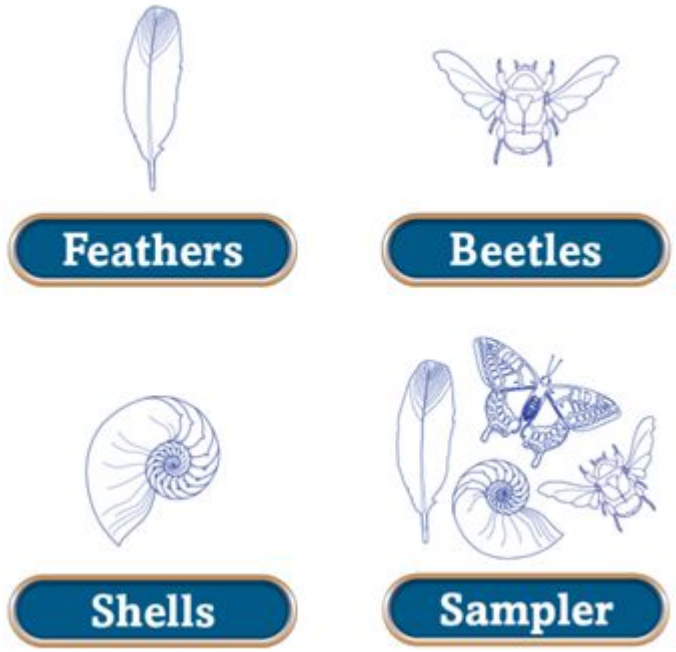
Phase 2: Investigate

Practice your observation skills!

When you were trying the activity did you notice any:

1. Usability issues
2. Evidence (or lack thereof) of sorting skills

Type your observations in the chat



Phase 3: Reflect

What do you think the goal of this activity is? (Open response)

- Practice sorting things by shape and color.
- To think about different ways to sort items .
- To understand how to sort things and why that may be useful
- To practice the skills of observing and classifying, even when the things you're classifying don't always fit into the neat buckets you'd like hem to.
- To allow people to experiment with different ways to sort things from the natural world; to illustrate that there are many different ways to categorize things, and different people will sort differently
- To make observations about objects, and consider what features could be used to categorize them. What features can be used to sort across multiple types of objects (e.g. color)
- To practice different types of sorting and designing something pretty
- To think about different ways you could categorize objects
- You can sort different objects into different categories.
  To come up with a heuristic for sorting things.

Phase 3: Reflect

What do you think the goal of this activity is? (Open response)

Learning about / thinking about sorting (n=6)

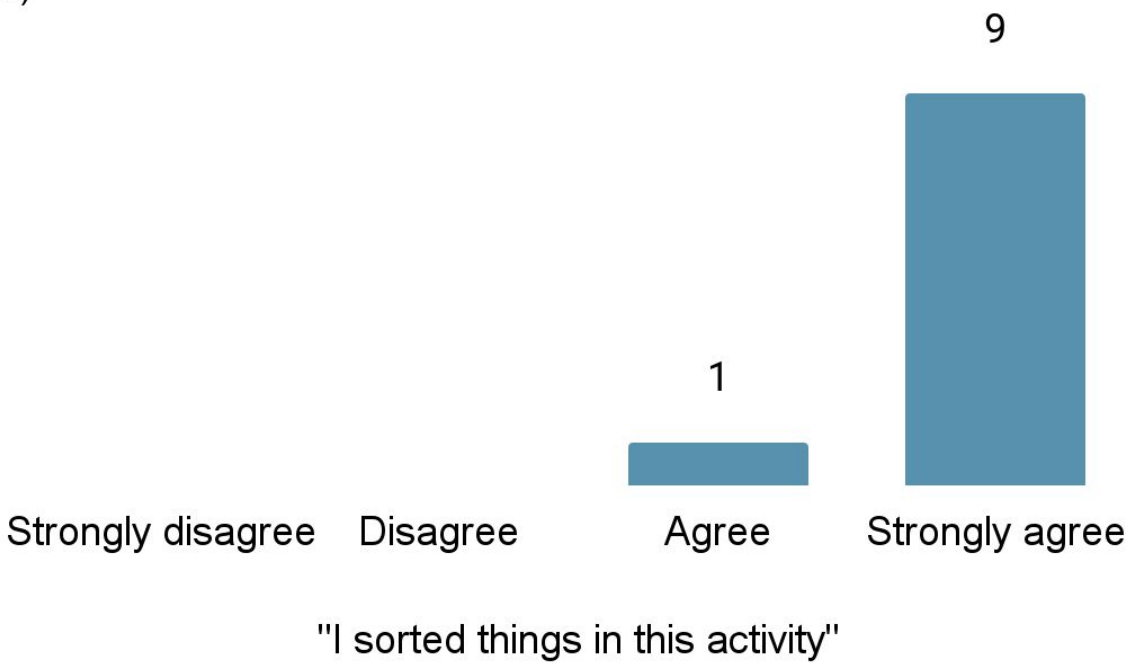
- To think about different ways to **sort** items.
- To understand how to **sort** things and why that may be useful
- To think about different ways you could **categorize objects**
- You can **sort** different objects into different categories.
- To come up with a heuristic for **sorting** things.
- To make observations about objects, and consider what features could be used to categorize them. What features can be used to **sort** across multiple types of objects (e.g. color)

Practice sorting / classifying (n=4)

- **Practice sorting** things by shape and color.
- To **practice the skills of observing and classifying**, even when the things you're classifying don't always fit into the neat buckets
  you'd like them to.
- To allow people to **experiment with different ways to sort things** from the natural world; to illustrate that there are many different ways to categorize things, and different people will sort differently
- To practice different types of **sorting** and designing something pretty

Phase 3: Reflect

How much do you agree or disagree with the following statement?
(n=10)

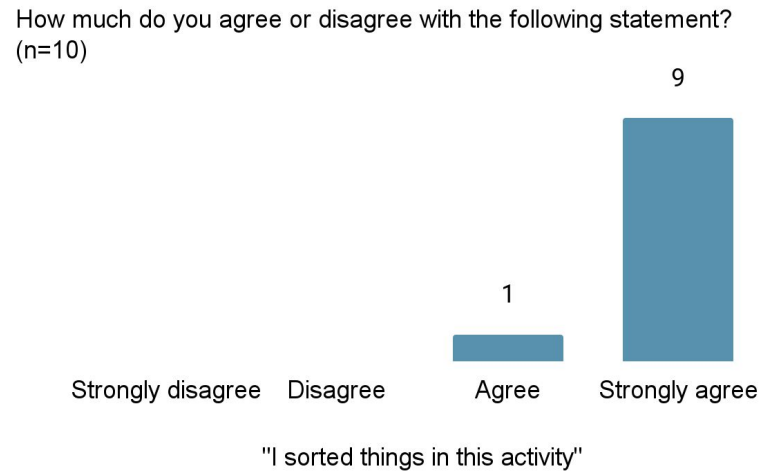


What do these data suggest for whether or not the activity is supporting sorting skills?

Phase 3: Reflect

What pieces of data are especially interesting or important?

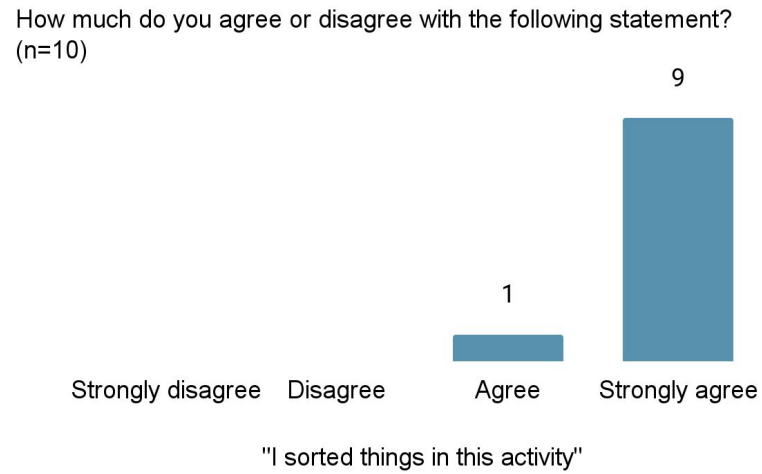
What themes or patterns emerge from the data?

Observations	Open-ended survey responses	Close-ended survey responses
	What do you think the goal of this activity is? ● Learning about / thinking about sorting (n=6) ● Practice sorting / classifying (n=4)	

Phase 4: Improve

What would you do to improve the activity based on these data?

What next questions could you ask for a future TBI cycle?

Observations	Open-ended survey responses	Close-ended survey responses
	What do you think the goal of this activity is? ● Learning about / thinking about sorting (n=6) ● Practice sorting / classifying (n=4)	

NISE Network TBI Tools

https://www.nisenet.org/catalog/team-based-inquiry-guide

Comprehensive guide

Tools

- Question worksheet
- Data collection forms
- Data analysis form
- Improvement brainstorm sheet
- TBI summary sheet

Training videos:

- Why TBI
- Preparing for TBI

Phases of TBI (Questions, Investigate, Reflect, Improve)

Q & A

Registration question themes:

- Virtual programming
  - Differentiation between evaluating "events" vs "experiences"
  - How to assess things that are not live events - enews, recorded videos, etc.
  - How to evaluate remote learning experience fairly
- Demonstrating to other staff/stakeholders that evaluation is important
- Promoting inclusive practices in data collection

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Thank You

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