# Professional Development Facilitator's Guide for Supporting Youth Agency

**Northern Illinois University**

**NSF**

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This professional development (PD) guide is for facilitators of PD programs for activity leaders (ALs) and counselors in summer and afterschool science, technology, engineering, and mathematics (STEM) programs for middle grades youth. The PD should be appropriate for those who work with youth in Grades 5 through 9.

This guide accompanies the PowerPoint slide deck pertaining to supporting youth agency in an Informal STEM Learning (ISL) program. It provides background and procedural information about the content and activities presented in the PowerPoint deck. Facilitators are encouraged to customize the PD to their needs. Some of the slides and activities can be selected depending on needs and the time available for PD. Several of the practical methods in the *How Activity Leaders Can Support Youth Agency* section can be used as stand-alone sessions.

The ultimate goal of the STEM Interest and Engagement (IE) project was to disseminate the practical implications of the National Science Foundation-funded study of summer STEM programs to ALs and directors of ISL and summer programs. A toolkit developed by the STEM IE project can be found at [www.niu.edu/stemie](www.niu.edu/stemie). It contains information about the project, resources, and highlights five aspects of programs (quality, activity settings, promoting relevance, facilitating interest, and supporting youth agency) that are important to engaging youth in STEM programs. You might want to refer to it while organizing the PD session(s).

# PowerPoint Slide Deck for
# Group Professional Development
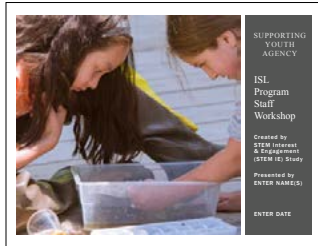
**Slide 1.** **Title Slide.**

Fill in the presenter's names and the date of the training. If available, you can replace the photo with one from the program(s) receiving PD. If participants do not know one another, have them share their names and, if they come from different programs or locations, ask them to identify the program or organization with which they are affiliated.
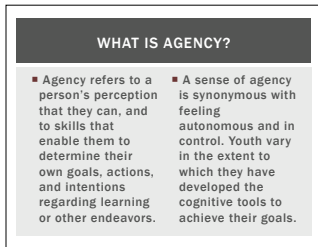
**Slide 2.** **What Is Agency?**

You can show this slide and move on (approximately 1 minute to introduce), or you can choose to prompt group discussion with these questions:

1.  In your own experience, has a sense of agency been important to (a) you when you were learning something or trying to accomplish a task and/or (b) youth with whom you have worked?

2.  Have you ever noticed how youth respond when their autonomy is limited or when they experience authoritarians (who are the opposite of agency supportive)?

(Discussion time can range from 5–10 minutes)
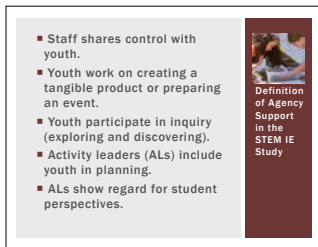
**Slide 3.** **Definition of Agency Support.**

This slide presents how support for agency was defined in the measures used in the STEM IE study (Youth Program Quality Assessment [YPQA] and Upper Elementary Classroom Assessment Scoring System [CLASS] instruments).
(1 minute)

# Slides 4-8.
## Why Agency Support Matters in ISL Programs .

**Slide 4.** **Section Title.**

This slide is section title.

> **Note:** The Chinese character means autonomy.

YOUTH AGENCY

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Some theorists believe that agency is a basic human need. Adolescents thrive on a sense of agency.
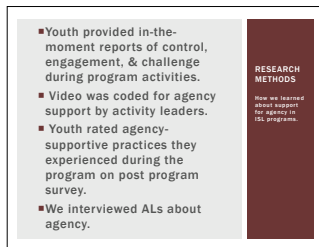
## Slide 5. Agency Support.

This slide is a brief statement about agency support.

**Add this detail:** Research studies have consistently found that a sense of agency contributes to intrinsic motivation toward academic and other tasks and to overcoming obstacles.

(1 minute)

**Slides 6–8** pertain to the research methods and specific findings from the STEM IE study. Some will want to know this detailed information and some will not. Accordingly, as facilitator of the PD, you can decide whether to include or delete Slides 6–8.

(Slides 6–8: 10 minutes)



- Youth provided in-the-moment reports of control, engagement, & challenge during program activities.
- Video was coded for agency support by activity leaders.
- Youth rated agency-supportive practices they experienced during the program on post program survey.
- We interviewed ALs about agency.

RESEARCH METHODS

How we learned about support for agency in ISL programs.

## Slide 6. Research Methods.

Research methods used in the STEM IE study are outlined.

**Details to share with participants:**

1. Youth were signaled several times during their ISL learning and activity time. They used an app on a cellular phone to provide in-the-moment reports of how they were feeling in the 15 minutes before being signaled.

2. Video coding included: staff share control with youth, youth work on creating a tangible product or preparing an event, youth participate in inquiry (exploring and discovering), ALs include youth in planning, and ALs show regard for student perspectives.



AGENCY SUPPORTIVE PRACTICES OBSERVED IN PROGRAMS: PERCENTAGE OF TIME DURING STEM LEARNING TIME

## Slide 7. Agency-Supportive Practices.

Figure 1 displays four of the agency-supportive practices (as indicated by the YPQA) used in the nine programs that were studied.

**Ask participants the following questions about the figure:**
What do you notice about the presence of these various autonomy-supportive practices in programs? First, look at overall averages. How about the variation between programs?
(5 minutes)

**Background information:** The majority of segments coded were characterized by the presence of these practices. Creation of a tangible product and making plans were less common. In addition, there were some differences in how a given practice was implemented. More than 70% of observed segments at both Uptown Architecture and Jefferson House involved the creation of a tangible product. At Jefferson House, the project took place outdoors in a space designed and constructed by participating youth. However, at Jefferson House, such activities included following a recipe to bake a dish or dessert. Although both resulted in a tangible product, the former involved substantially more skills and effort than the latter example.

**ACTIVITY LEADER REGARD FOR STUDENT PERSPECTIVE ON (1-7 POINT) SCALE**

**Slide 8.** AL Regard for Student Perspective.

Figure 2 displays AL regard for student perspective as indicated by the CLASS in the nine programs that were studied. The CLASS is scored on a 7-point SCALE and indicates how responsive the leaders and the planned activities were to youth interests, motivations, and points of view.

**Ask participants the following question about the figure:**
What do you notice about the extent to which there was regard for student perspective in the various programs?
(5 minutes)

**Share this information:** Most programs averaged in the mid-range of the scale. Two of the higher scoring programs were very different from each other. Uptown Architecture focused on empowering youth to design and construct an outdoor classroom space, while Adventures in Mathematics was predicated on building the basic mathematics skills of participating youth. In this sense, these practices can be universally applied.
(1 minute)

**RESEARCH IDENTIFIED IMPORTANCE OF AGENCY SUPPORT**

1. ALs agency support predicted youth being engaged and challenged in the learning task.
2. Girls felt less in control than boys. Like boys, they responded positively to agency supportive practices.
3. Youth in-the-moment reports of having control matched their reports of agency supportive practices on the post program survey.
4. Many ALs strongly endorsed the importance of supporting youth agency. Yet, some struggled with turning over control and keeping youth on task. Youth behavior was sometimes difficult to manage, which deterred ALs from sharing control.

**Slide 9.** Research Identified Importance of Agency Support.

This slide summarizes findings from STEM IE research.
(1 minute)

# Slides 10–20
## How ALs Can Support Youth Agency.

**HOW ACTIVITY LEADERS CAN SUPPORT YOUTH AGENCY**

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**Slide 10.** Section Title.
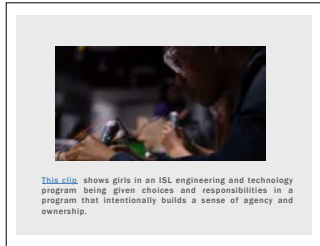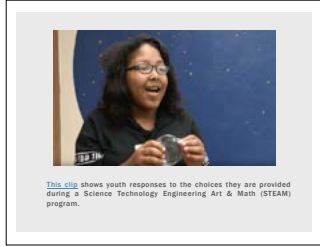
This slide is a section title.

**Large: What do you want to build/know/design and for whom?**
"Here are the tools we have available: How can you do this?"
"The group needs to decide how you will break up these tasks."
**Moderate:** "What do you know about cells?" Youth then generate questions and plan labs to answer those questions. "X, y, and z need to be done: Who wants to do x?"
**Small:** Youth can choose which order to complete things, where to work, and what color to use on a graph. Caution: choosing who to work with can lead to less engagement.

Types of Choices

**Slide 11.** Types of Choices.

Examples of large, moderate and small choices are provided.

## Slides 12–13. Video Clips.

**Ask participants to observe:** What kinds of choices were youth given in one or both of the programs? After viewing, have them share some examples.
(5 minutes)

**Share with participants:** In a previous study conducted in classrooms, adolescents who were given either large or small choices reported feeling more agency than if they were not given any choices. However, the type of choice they were given did matter in terms of how engaged youth were in the activity. When young people got to choose who they were working with, they were more likely to show universally low engagement in the task. When they were able to choose how to frame the problems and/or how to complete a course activity, they became fully engaged. Choosing materials was associated with having fun but did not lead to working harder.
(1 minute)

**Activity:** Have participants select an activity that will be implemented during the program (small groups can work on different activities). They should individually make a list of the ways to provide choices during the activity (5 minutes). Then, in a small group, share and discuss their lists (5 minutes). The group should select and make specific plans to implement selected ideas.
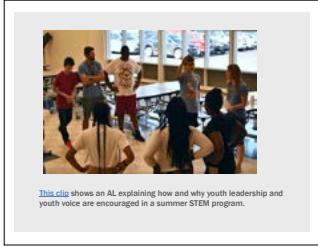(10 minutes)

**Note:** If ALs are not familiar with the curriculum, the facilitator will need to provide a list of suggested activities and have curriculum materials available for reference.

This clip shows youth responses to the choices they are provided during a Science Technology Engineering Art & Math (STEAM) program.

This clip shows girls in an ISL engineering and technology program being given choices and responsibilities in a program that intentionally builds a sense of agency and ownership.

## Slide 14. Provide Youth with Opportunities to Take Responsibility and Contribute.

**PROVIDE OPPORTUNITIES TO TAKE RESPONSIBILITY & CONTRIBUTE**

- How can you can give youth responsibilities within the program. What tasks and roles can they take on?
- How can you extend responsibility beyond the program?

For example: Young adolescents can teach, assist, or present activities or projects to younger children attending adjacent or nearby programs. Alternately, they can use media to create books or videos teaching or demonstrating a concept for younger children.

**Tell participants that:** It is not surprising that when youth are provided choices, they feel that they have more control and ownership over their learning than if they are told exactly what to do and how to do it. The flip side of choice is responsibility— when youth are provided with choices, they also are expected to take responsibility. Typically, the more that youth are given responsibilities and expected to be active contributors, the more they feel a sense of ownership and belonging.

Ask the whole group to generate ideas for how youth can be given responsibilities within their program (record these ideas on a board or large piece of paper). Should roles and tasks rotate? How often?
(5 minutes)

**Alternatively:** Put participants in small groups. Either give each small group the same major activity from the program or give each group a different major activity from the program. Ask them to identify (list) how youth can be given responsibilities within the activity. What specifically will youth be asked to do? Should these roles and tasks rotate? How often? Share when finished.

This clip shows an AL explaining how and why youth leadership and youth voice are encouraged in a summer STEM program.

**Slide 15.** Show Regard for Youth Voice Video Clip.

Show the video clip from a program that excels at fostering youth voice.
(3 minutes)

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**SHOW REGARD FOR YOUTH VOICE**

1. Encourage youth to share their ideas. Listen and ask follow up questions of the speaker and of others ("can you add anything to what Kiera just said?" or "what are your thoughts about..?"
2. Provide think time before youth share.
3. Ask questions to help clarify thinking rather than saying "that's wrong."
4. Incorporate ideas from youth in programming.
5. Establish (with youth) norms for working and learning together.

**Slide 16.** Show Regard for Youth Voice.

Introduce or remind participants of an activity in the program. Ask them to brainstorm all the ways that the elements of regard for student perspective could be fostered throughout the activity. Participants can do this as a large group, or they can talk to someone sitting near them and then share back with the group.
(5–10 minutes)

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**EMPHASIZE YOUTH OWNERSHIP OF THE LEARNING PROCESS**

Use an **inquiry** approach.
■ Careful planning and advance preparation of materials and procedures provides essential structure that enables youth to observe, ask questions, organize their investigations, interpret their data, and present their findings. Structuring these tasks is crucial for successful activities.
■ Set up opportunities for youth to ask questions and to formulate the questions into a plan to learn more.
■ Provide youth with materials to answer the questions and to solve the problems themselves, rather than telling them the answers to problems.
■ Arrange for youth to present their findings or products.

**Slide 17.** Emphasize Youth Ownership of the Learning Process with an Inquiry Approach.

**Activity 1:** Introduction to an Inquiry Process. Distribute this one-page handout to participants: http://www.sedl.org/afterschool/toolkits/science/pdf/ast_sci_inquiry_table.pdf

Select and show one or more of the first three videos (depending on need and level of prior knowledge). Lessons 1, 2, and 3 from the 4-H site range from 7–10 minutes each: https://www.youtube.com/user/national4H/videos?query=inquiry-based

**Activity 2:** Experiencing an Inquiry Process [highly recommended]. http://beetlesproject.org/resources/for-program-leaders/evidence-and-explanations/

Prepare by studying the leader guide and slides, reading background information, printing handouts, familiarizing yourself with the process, selecting an object for the activity, and watching the video of the session.

Present the workshop, including working through the student activity, with workshop participants.

http://beetlesproject.org/cms/wp-content/uploads/2015/12/NSI-Nature-Scene-Investigators.pdf
(2.5 hours)

Additional BEETLES workshops relevant to an inquiry approach include Making Observations, Promoting Discussion, Questioning Strategies, Constructing Understanding, and Field Journaling.
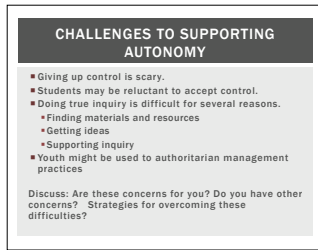
**Slide 18.** **Challenges to Supporting Youth Agency.**

Read through list of challenges.
(1 minute)

Ask participants to discuss.
(10 minutes)

> **Optional:** To set up the next topic regarding authoritative versus authoritarian (controlling) management, you can have a bag of candy or small salty treats (small bag peanuts or pretzels) and let each person who shares an idea chose a "reward." Hold up the treats, walk over to the person sharing and open the bag. Observe what happens. Typically, people pause in what they are saying to look at and select a treat. Some people reject taking a treat perhaps by holding up their hands or shaking their heads "no".
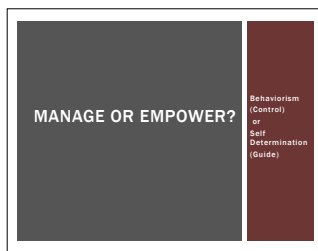
**Slide 19.** **Managing or Empowering.**

If you used rewards, ask participants to discuss what they noticed about the discussion. If no one responds, ask: What happened when you were offered rewards? Did any of the following happen: The rewards became the focus of attention, not the point of the discussion (learning); participants tuned out after they got their reward or if it was not something they wanted; or some "resisted" being controlled or were insulted by the offer of the reward.
(5 minutes)

**Slide 20.** **Rewards.**

> **Share with participants:** There was a considerable emphasis on "rewards" and "winning" in both the classrooms and programs we have observed.
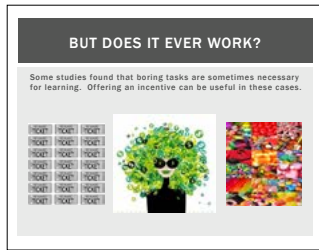
> **Ask participants:** Think about how much you use rewards (praise, tokens, candy, or providing special privileges). Beyond the idea that they are controlling, are there other consequences?
>
> Click on the question mark to play this video from 1:50–8:11:
> http://www.ted.com/talks/dan_pink_on_motivation

Ask for reactions.
(15 minutes)

**Slide 21.** Do Rewards Ever Work?

Another problem with rewards is that experimental studies have shown that they decrease intrinsic motivation *unless* youth are being asked to do boring rote tasks.

ALs can be asked to share their own experiences with this phenomenon. Emphasize that an extrinsic focus undermines students' sense of control, decreases intrinsic motivation, and can increase learned helplessness. When necessary, try to make it a logical/natural incentive. For example, "When you are finished cleaning up your table, you can get a drink/have free time until x time," or whatever natural or logical incentive makes sense.

**Activity:** This can be practiced in the following way: Have participants pair off. Give each pair four cards with the following written on each card. They should divide these so that each has a turn reading two situations and responding by suggesting logical or natural consequences to two:

**Situation 1:** Several youth straggled behind on a hike to a spot where they would record observations of a natural phenomenon. When a counselor went back to encourage them to keep up, she found them lighting matches, which they were flicking into the woods.

**Situation 2:** One of the youth in the program consistently breaks the safety rule about wearing goggles.

**Situation 3:** A self-chosen small group excludes and jeers at one of the other campers.

**Situation 4:** A few of the youth are not making progress on their projects because they are spending the work time socializing with others.

Discuss and share ideas in the large group.

(10–15 minutes)
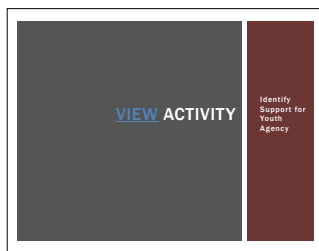


**Slide 22.** Culminating Activity.

Have participants identify all the ways that youth received support for agency in this clip. Do they see any opportunities to offer more support? View the video clip by clicking on the link. If the clip is not a good match for the participants, an alternative video clip to view is:

https://youtu.be/zKi8UklCXsQ

(10+ minutes)
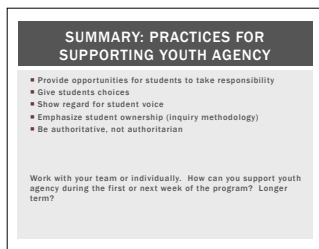


**Slide 23.** Summary.

Place participants in small groups if there are naturally occurring teams or have them work individually to plan what they want to do to increase their support for youth agency during the first or following week of the program and what they would like to do long term. Have them write down their specific plans. (10 minutes)

Have participants share what they planned.
(5–10 minutes)