



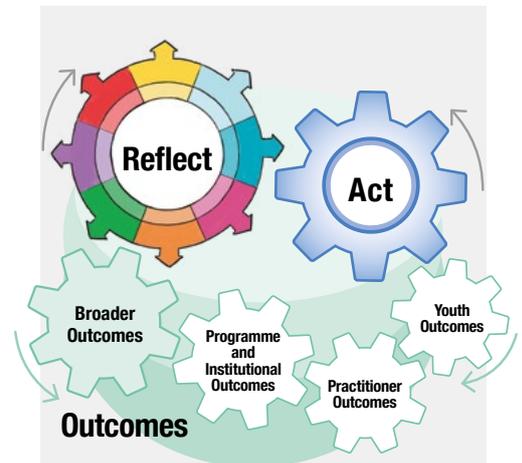
Embracing Humanity



YESTEM Insight #2.7

What is the issue?

- Many youths do not feel like their “whole person” is invited into informal STEM learning (ISL). Their feelings, experiences, histories, hopes, and fears are often not central to what happens in ISL. When people are denied their full selves in learning, their lives and histories are erased.
- This erasure can result from ISL experiences which center or reinforce dominant cultural norms in STEM. These dominant norms can position youth as outsiders. They can also limit the possibilities for seeing youth for who they are and want to be in ISL.
- Youth of Color, youth who are low-income, youth who are undocumented, and youth who speak languages that the larger dominant culture does not speak can face dehumanization on a daily basis.



YESTEM Model for equity in ISL

Please see yestem.org for the full model and related Insight documents detailing each component.

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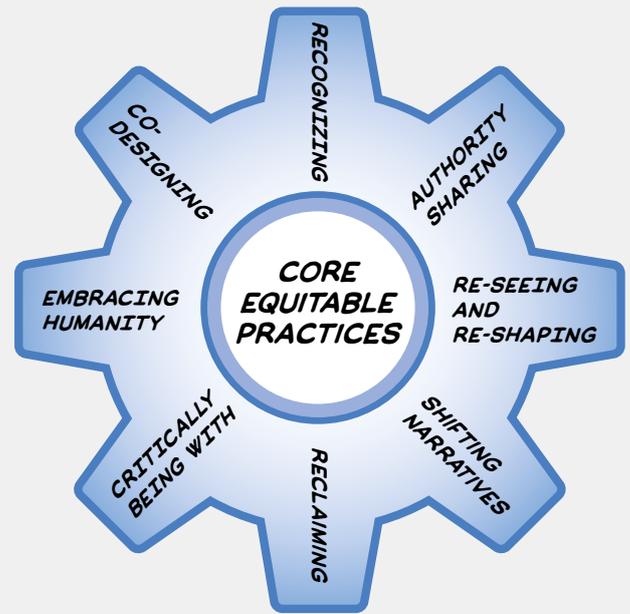
What is the practice?

The most powerful and socially transformative learning happens when people are supported in being their fully human selves¹. Learning is not only about what and how people think, but also about what and how people feel. Youth relationships, feelings, identities, languages, and cultures are all a part of learning. **Embracing Humanity** is a **relational and ethical practice** that values individual learners as fully human: **Who they are, not who they're expected to be**. This practice involves seeing humanity in others, our interdependence, and how each of these is shaped by context and histories.

There are many different ways ISL educators enact this practice:

- Planning for activities in ways that make space for youth to express themselves and to share and teach others about their strengths, stories and experiences. This can mean deviating from an original plan, because one cannot anticipate what youth may experience in the moment.
- Regularly investing time and energy into building emotional connections and relationships with youth, their families and their communities.
- Engaging in dialogic consciousness-raising conversations about the experiences that youth have in ISL, especially those related to erasure through white supremacy, heteropatriarchy, and economic exploitation.
- Supporting youth to comfortably feel and express the wide array of emotions drawn from multiple aspects of their lives and from their rigorous engagement in STEM (e.g., fear, uncertainty, not knowing).

Act



Embracing Humanity is a relational and ethical practice that values individual learners as fully human: Who they are, not who they're expected to be.

Visit yestem.org for more information and resources from our international research effort.

1. Freire, P. (1970). *Pedagogy of the oppressed*. New York: Continuum.

Spotlight on practice: JJ dancing with the joy of making it work (US)



During the Youth Action Council summer camp, youth were engaging in an e-textile backpack project. JJ wanted to stitch LED lights onto his backpack and program them to blink. The task was challenging in

many ways and caused JJ frustration. He needed to understand how circuits work, how to design the circuit to work as he had imagined, and how to sew the circuit so that it would consistently light up. When he struggled to get his circuit to work, he cried and then felt embarrassed for doing so. Educators noticed JJ's frustration, and legitimized it as part of his efforts and desire to realize the project he imagined. When JJ finally could light up his backpack straps, he spontaneously got up and danced wearing his lit backpack! Educators joined in the dance with JJ. Later, JJ helped his peers who were in the middle of the challenging task and encouraged them saying, **“you know I even cried, but if you know this (showing how to design the circuit on a paper), and just do like this, and keep doing it (showing how to sew).”** JJ kept helping his peers and exclaimed with them when they successfully got their project to light up.

Spotlight on practice:

Valuing Lara as a “whole person” in the STEM club (UK)

Lara was a 12-year-old girl who took part in an after-school outreach programme that was organized by a science center. Her family had recently migrated to the UK from Eastern Europe and Lara was working hard to learn English and navigate the English education system. During the initial after-school sessions, Lara was shy and appeared uncomfortable and disengaged from the activities. She frequently asked for explanations of specific English words that she did not understand. Lara also confided that she did not particularly enjoy science and STEM, and had found school a struggle in England.

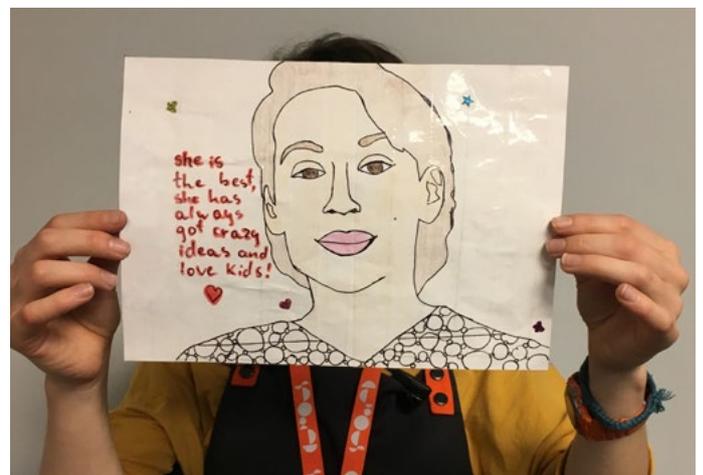
Tessa, the educator from the science center who ran the sessions, noticed Lara's difficulties and **took time to regularly check-in with Lara one-to-one.**

Tessa would often encourage Lara and other emergent bilingual youths to share key terms in their languages alongside the English version, thus seeing and valuing young people for who they are.

Tessa learned that Lara loved drawing and subsequently designed activities that would enable Lara to contribute her artistic skills, **deviating from her original plan.** Lara cautiously shared her artwork with Tessa, who praised Lara's work in front of the group and promised to exhibit the artifacts at the science

center. Over time, Lara became noticeably more comfortable during the sessions.

Tessa's practice of Embracing Humanity **allowed Lara to be a “whole person”** during the STEM club - she **regularly invested time and energy into building relationships** and celebrated Lara's skills beyond STEM. Tessa's efforts had a noticeable impact on Lara, who surprised Tessa at the end of the year with a beautifully drawn portrait of her. Lara spoke positively of her experiences on the programme during her final post-program interview.



How to use this practice: Reflect

Reflection questions

1. What are some ways you have created (or could create) spaces for embracing youth as fully human in your program/institutional spaces?
2. Which kinds of feelings, hopes, dreams and worries have you observed from the youth who engaged in your program, and how have you cared and embraced their being fully human?
3. Have you noticed moments when youth have been shut out or shut down because of who they are, what they care about, how they act or express themselves, and so on? How have you handled these moments?
4. What challenges may exist or emerge when you seek to enact this practice at your institution? Who would need to be invited to help you enact this practice in your learning space?

How to use this practice: Act

Things to do

1. Start the day by making space for youth to share feelings

(e.g., a quick thumbs up/down/sideways, time to share with you/group, etc.) Model active listening and supportive responses.

2. Spend moments with each youth as you walk around the room

Ask how they think about the ideas and how they are drawing on their available resources and expertise.

3. Create space and routine practices

For youth to engage in projects they love, take a break when they need to, and reflect (e.g., a “chill zone” corner).

4. Incorporate a variety of ways for youth to express their ideas

Support everyone in hearing a variety of ideas, not just from extroverts (e.g., small group work, write ideas down, etc.). Storytelling is an effective form for youth to share their human journeys of learning, doing, struggling, and succeeding!

5. Be open to expressing your own vulnerability

Show youth that you are open to recognizing and connecting with their humanity (e.g., joy, frustration, sleepiness, fun).

6. Design for joy in STEM

Consider inviting youth or community members to “co-plan for more joy” in program activities, bringing in different cultural ideas and perspectives.

7. Consider hosting inter-educator workshops

Learn from colleagues identifying and sharing cases where they tried to humanize youths’ learning experiences.

Additional tools and resources

Try out some “Talk Moves”

Talk moves can help to elevate and value youths’ contributions. Some moves create spaces to help youth share how they feel, are, and want to feel and be. Other moves create new possibilities to amplify positive emotions and experiences that help youth and educators feel embraced and acknowledged as human.

Create spaces to help youth share how they feel, are, and want to feel and be

- “How do we all feel about that idea? Why do we feel or think that way?”
- “Would you tell me about your day?”
- “Are there any moments in particular that you want to highlight?”
- “What do you think went well? What did you enjoy? What was challenging?”

Amplify the positive emotions and experiences

- “What do you want to share with others about today? What did you enjoy? Would you tell me more about how you enjoyed it?”
- “What are some things we do here that help you feel like you belong? What are some things you wish we would do?”

Example tools from educators

- **Chill zone:** Securing social/physically present space in which youth can feel comfortable to be themselves.
- **Circle time:** Ensuring time for youth to share their daily lives as part of daily practice.
- **Storytelling project:** Encouraging youth to express how they engage with STEM by incorporating their stories into individual/group projects.

About our project

- Over four years, our project involved researchers, ISL educators and young people working in partnership to develop new understandings and insights about how ISL might better support equitable outcomes for young people aged 11-14 from minoritized communities.
- Our project partnership involved data collection in the UK and the USA with partners in two science centres, two community STEM clubs, a zoo and a digital arts centre.
- Overall, 260 young people and 30 practitioners took part.
- In the wider project we also conducted surveys with 2,783 young people.

For the full range of Insights documents summarizing the project’s tools and resources, including Core Equitable Practices and Equitable Youth Outcomes Model, please see yestem.org

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Disclaimer

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