LEARNING FROM EACH OTHER:

Intergenerational Learning with Storytelling and STEM

Ashley Braun | Digital & Family Learning Librarian, The Seattle Public Library
Amy Twito | Informal Learning Program Manager, The Seattle Public Library
Rekha Kuver | Youth & Family Services Manager, King County Library System
Carrie Tzou | NSF Grant Principal Investigator, University of Washington Bothell
Participatory Design Qualities
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There’s more than one way
Five Qualities of Participatory Design

Presentation Scope

What is the NSF grant project “Robot Backpacks”?

What is Participatory Design & Why?

Five Qualities of Participatory Design

What do these qualities look like:

in partnerships

in programs
Who We Are:

National Science Foundation
University of Washington, Seattle & Bothell
The Seattle Public Library
Pacific Science Center
Highline Public Schools Native Education Program

Our Story: What is Robot Backpacks?
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What We Do:
- Professional Development
- Deep Family Learning Workshops
- Home Play Family Backpack Activities
- Booster Day Family Events

robotics, e-textiles & storytelling
Our Story: What is Robot Backpacks?
Stakeholders actively participate in the design process.

Participatory Design Qualities
Everyone holds knowledge: Centering Strengths

what it looks like: In the Partnership

- Involve multidisciplinary partners
- Acknowledge & disrupt traditional power dynamics
- Make time for reflection
- Value community-based knowledge and expertise which are always present

what it looks like: In the Program

- Avoid prioritizing certain forms of engagement
- Provide moments of authentic choice in project-work
- Infuse storytelling as a practice in the program
- Value expertise in all its forms
Trust takes time: Committing to Relationship-Building

what it looks like: In the Partnership

- Invite stakeholders early & consistently
- Establish group norms
- Meet regularly face-to-face

what it looks like: In the Program

- Include unstructured time in the program
- Offer multi-session programs
- Talk with adults & youth separately about goals
- Participate in all of the activities fully
Clear the way: Making It Possible to Show Up

- Flex options for participation (such as web meetings or asynchronous communication)
- Set-up mechanisms for judgment-free feedback

what it looks like: In the Partnership

what it looks like: In the Program

- Offer programs in convenient location
- Provide meals or snacks, childcare, translation, or other barrier-reducers
- Scaffold modes of participation for varying ages, abilities, interests, etc.
We're in this together: Developing Mutual Responsibility

what it looks like: In the Partnership

- Establish clear lines of communication
- Co-construct a shared vocabulary & understanding
- Understand where, when & how to contribute
- Abandon the need to know everything

what it looks like: In the Program

- Model your own learning
- Facilitate skill-sharing between participants
- Ask: How do we learn together?
- Establish group norms
There's more than one way: Embracing Fluid Roles

what it looks like: In the Partnership

- Maintain porous roles from a place of trust & understanding
- Customize support levels & styles

what it looks like: In the Program

- Reflect on identities and skills in development
- Think through how role fluidity can emerge in age-banded vs. intergenerational programming
Tell the story of an important event that happened in your family

Tell a story of a place that is important to your family

Family Storytelling: Participatory Design in Action
Family Storytelling: Participatory Design in Action
Learn More & Reach Out:

TechTales Website:
https://techtales.online/

Reconceptualizing Libraries: Perspectives from the Information and Learning Sciences
Chapter 4: Building Expansive STEAM Programming Through Participatory Design Research
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Amy Twito | amy.twito@spl.org
Informal Learning Program Manager
The Seattle Public Library

Rekha Kuver | rpkuver@kcls.org
Youth & Family Services Manager
King County Library System

Thank you!

Ashley Braun | ashley.braun@spl.org
Digital & Family Learning Librarian
The Seattle Public Library
Appendix A:

Learning is Cultural Design Principles,
NSF Backpacks for Family Science Learning
University of Washington, 2016

LEARNING IS CULTURAL

- Promote multiple ways of knowing and making
- Scaffold playful thinking and teaching with your hands & body
- Broaden "what counts" as STEM using everyday & professional forms
- Learning experiences should grow out of the lives of learners
- Support full family engagement and contribution throughout
- (Re)position family members as developing experts working on authentic projects