Broadening Conceptualizations of Learning: Fix-It-Foxing as a Practice for *Learning From* and *Learning With*

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Abstract: Sensemaking is often characterized as *teaching to / learning from*, constraining understanding of when / where learning occurs, emphasizing exogenous definitions of learning, and presuming learning only occurs from older more knowledgeable others. A characterization of *learning with* complicates these static roles, attending to practices developed in context through participants sensemaking. I examine engagement in a family practice to understand how *learning from* are complemented by *learning with* for purposes children value.

Framework

Human sensemaking is a core practice in all communities, yet normative accounts focus on learning primarily as a *teaching to* / *learning from* dynamic. Doing so constrains understanding of how people engage together in the activities they value by: limiting our understanding of where / when learning occurs (Leander, Philips, & Taylor, 2010; Warren, Ogonowski, & Pothier, 2005); emphasizing exogenous definitions of learning (Keifert & Stevens, 2019); suggesting learning only occurs from engagement with permanently more knowledgeable others (Cannella, 1999), and assuming multi-generational learning configurations have unidirectional knowledge flow from older to younger. I present findings from a study in partnership with young children (ages 2-8) and their families through longitudinal video observation of everyday activity.

Learning with complicates these static roles, examining learning arranged by and for the participants themselves. This approach centers members' experience—understanding of activity from participants' perspectives rather than from exogenous "authorities" (Sacks, 1967/1992). It expands beyond understanding of participants arranging to *learn from* (Stevens, 2010) and assumes that even young children can arrange for their own learning in the moment to accomplish valued goals, rather than educators arranging collaborative learning opportunities for them (e.g., Hmelo-Silver, Chinn, O'Donnell, & Chan, 2013).

Methods for a study of early learning

The Early Learning Across Contexts project video-recorded families and young children across home and school contexts when children were in preschool (ages 2-4) and again when the same children were in early elementary (ages 6-8). I present summary findings of interaction analyses (Jordan & Henderson, 1995) of 40 hours of video observations, research and participant-collected images, participant-collected video, and reflection interviews with families in the early elementary phase of the study (Keifert, 2015). I present Catherine Lundin's (age 2-3, 7 years old) participation the family practice of Fix-it-Foxing—a valued engineering-related practice in her family—as evidence of multiple arrangements of *learning with*.

A family practice of being a Fix-It-Fox

Fix-It-Foxing was a valued family practice described as figuring out how things work and fixing them. Lundin family members engaged in the practice during our observations, but the practice was a tradition across multiple generations (evidence of a family culture; Rogoff, 2003). As Mom said to Catherine, the "grandfather of all Fix-It-Foxes" taught "Daddy what he knows about Fix-It-Foxing, and then Daddy is teaching you" and later explains to me they built a garage extension to provide "more space for the Fix-It-Foxes" (9/30/13).

Building a horse shelf

In that very garage, Catherine (age 7y 0m) and Dad built a "horse-shelf"—an instance of Fix-It-Foxing. Catherine had seen an expensive version for sale and decided to make her own. They drew a plan, then built a frame (Figure 1A). Catherine raised a "design problem": keeping the shelves from moving in place by gluing them to the frame. During the subsequent 45 minutes they address the problem by gluing shelves in place and planning next steps (9/3/13). Although neither had previously built a horse-shelf, Catherine drew upon Fix-It-Foxing to recruit Dad to learn with her to make one (Figure 1B). Dad then drew upon his experience Fix-It-Foxing to support the project. While Catherine was certainly learning *from Dad* to participate in the world as a Fix-It-Fox, she was also recruiting Dad through the practice to *learn something new together.*

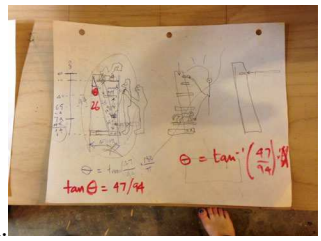
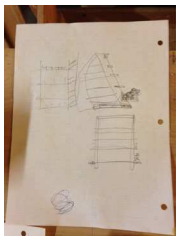
A.    B. 

Figure 1. A. Catherine's multiple drawn plans. B. Catherine and Dad do a final inspection of the horse shelf.

Other design problems

I observed the Lundins articulating many design problems. For instance, after climbing on a new "tread-wall" Dad and Stuart (Catherine's brother) talked about how to build one (10/11/13); Catherine and Dad explored the design problem of creating medical tape that could be both sticky and repel stuff like hair and dirt (8/22/13); and Stuart puzzled over the additions to an electric boat kit given to him by his grandfather that might allow him to redesign the motor to be more powerful (8/21/13). In all instances, design problems presented opportunities for all family members to wonder, work out new ideas and designs, and *learn with* one another.

Learning with and *learning from* through Fix-It-Foxing

Catherine was *learning from* and *learning with* while Fix-It-Foxing. Catherine drew upon a local practice to achieve her goal, and was supported by Dad's previous experience Fix-It-Foxing. Examining this instance of a local sensemaking practice and a pattern of exploring design problems together in the Lundin home helps explicate how *learning with* was arranged towards particular purposes (to address design problems) even as Dad and Dad's father may have supported *learning from* them their Fix-it-Foxing know-how. This highlights the need to examine contexts closely to understand how family culture and particular valued practices are recruited by children to attend to their own interests and concerns in equitable relationships supporting *learning with*.

Significance

An understanding of *learning with* broadens conceptualizations of learning to a *plurality of phenomena* that permeate human experience. By freeing learning from the constraints of traditional assumptions that learning happens *from* others' teaching, we examine how *learning with* might happen in participants' lives in ways that challenge normative power relationships. This work is critical to building theories of learning that encompass lived experience across the diverse settings of people's lives.

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