DESIGN LITERACY
Spaces for Making

A ROUNDTABLE REPORT

We were interested in exploring the notion of "making" outside the traditional disciplinary realms for makerspaces. Then we began asking ourselves if—in fact—making is becoming a new way of being, of being in the world, recognizing that learning as making has the potential to transform human experience in the way that the spread of literacy transformed human experience and cognitive structures centuries ago.

At some future time, there may be a recognition of this period as a very important inflection point in terms of the way we understand ourselves and the way we create knowledge. So, our questions are:

Can design literacy transform the human experience?

Is there a distinct set of skills that we can push out to the world that actually changes the way we relate to the world and to one another?

It is possible this could be the defining attribute of the post-literate mind. We think that as we move farther and farther from our roots in traditional textural and language-based literacy, what it is to be human will be to engage in design-based behavior. Makerspaces will become the archetypal setting for that becoming—something like what a cathedral is to religion, what a library is to book.

This is a big audacious statement or perhaps an audacious set of questions.

It took us some time to get to there. **We started off with the question, well, how do we design a makerspace for the humanities or the social sciences, disciplines beyond those traditionally engaged in making as learning?** From that discussion we came to realize there are certain disciplines in which problems are regularly solved as part of learning in that field. These are disciplines in which there is a real, tangible relationship between what is being learned and how that learning is applied in the field.

There are other disciplines that may not focus directly on problem-solving, but we recognized that problem-solving is something all students will have to do when they get out into the professional world. So, we started thinking, what does it mean for a history major, an economics major, students majoring in non-STEM fields to have problem-solving, making things as part of their undergraduate learning experience?

Understanding that students in these fields may start off with a problem or question and tackle it solely by thinking and talking, reading and searching, we explored how learning by making could be inserted at some point, following the initial exploration and definition of the problem or question.

This could be an important milestone in the process of learning for all disciplines. By establishing the approach to learning inherent in design literacy, we thought learning in all disciplines would be enhanced.

Spark Innovation Studio
Kent State University

Emily Carr University of Art & Design

Forbes Center for the Performing Arts
James Madison University

da Vinci Center for Innovation
Virginia Commonwealth University

The process of design thinking, or design knowledge creation, is iterative. It is also generative. It is a way of creating knowledge. One of our "aha" thoughts was that one way learn is the experience of "being in the zone" that happens with doing something with your hands. Maybe it's a little bit like athletics, but it could be different.

We thought about different ways that a kinetic experience might contribute to someone who is not in a field like engineering that is more about making a tangible, physical thing. A history faculty member could design an activity that puts students back in a particular moment in history, asking them to solve a problem faced in their day by turn-of-the-century well-diggers within the constraints of their time. This would give those students new insights and relationship to that historical context.

This is one idea about how design literacy can transform the human experience. It would involve recognizing design as a legitimate form of knowledge creation. It would be on par with physical science research, natural science research, and social science research. This would be a new way of carving out a legitimate domain of human understanding.

Our poster suggests multiple modalities of making corresponding maker spaces. We have a little hub diagram of very different kinds of making.

We very much resonated with the idea of theater spaces as making spaces, craft spaces, spaces for hard-core engineering spaces. Maker trucks like food trucks. Maker trucks that pop out on a campus.

Our discussion ended with considering how all students would learn and apply design to solve problems, answer questions, develop their intellectual identities by adding a design identity.

We got excited thinking about how this approach could really transform the learning experience for all students, how it could become a new paradigm for learning in the undergraduate setting. **All students would not start their learning experience as a purely knowledge-based experience. Learning as designing, as making could be for all.**

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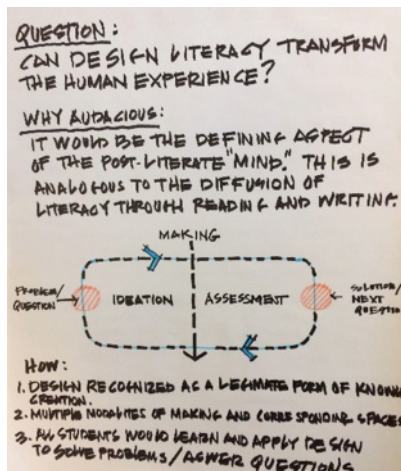
"I think you are misunderstanding what is already going on in disciplines like history and economics. I was a history major; I spent time in special collections; I felt the manuscripts, looking at a wide range of materials, creating my own ideas.

So this is a methodology and it is not like there is one methodology for history. In history, students are exposed to many different modes of inquiry. In economics, problem-solving is what they do. They are creating models. They are gaming.

Finally, I think we should not think about forcing physical making on all disciplines. Having students engage in making in a way that actually reflects practice or potential practice in a particular field is happening already.

Many students are now engaged with digital humanities and they are doing fabulously creative things. It may be or does not need to be tactile.

In addition, libraries are now becoming spaces where learning as making can happen for students in all disciplines, all majors, all classes."

— Roundtable Colleague Comment