

Design-Lab

Rethinking Education

August 27, 2016

Welcome to Design-Lab 1.0



The Pail and the Fire

Welcome! You are pioneers in an experiment into not only what we can learn, but also into rethinking how we can learn. [Somebody, apparently](#), once noted that “Education is not the filling of a pail, but the lighting of a fire.” So let’s be clear from the outset. This is not a class about filling a pail...about pouring knowledge into your brain-pails. This will be a class where you get to light fires, fires in your mind and in your life, and to learn from the light and the heat generated by your inspired work.

But we’ll come clean here. Lighting a fire is a lot harder than pouring knowledge into your brains. Sitting, listening, and then hoping to remember things...that’s a passive act. It’s you, in a seat, taking notes (maybe). That’s an act of passive consumption. But lighting a fire? You have to find the kindling, strike the matches, blow the embers into a flame and then tend it and, hopefully (the Scouts among you will tell you this), if there’s not a lot of wind, if the kindling is dry, if there’s no sudden

downpours, and if the airflow is right...hopefully you'll start the fire. And that? That's a lot of work. But it's also far more rewarding than being a filled pail.

Thus, one difference about this class is that we will insist that you spark your own fires, and that perhaps, in doing so, you ignite fires in others. We commend you for signing up for design-lab; for agreeing to a sort of cognitive pyromania, and for being willing to explore, discover, and learn together.

Overview of the Class

In this, it's inaugural year, Design-Lab (or whatever we decide to call this brand of learning) is a semester-long class. Mr. Tom Komp and Mr. Garreth Heidt (Sir Garreth), have loosely scripted out the first half of the semester as an experiential 5--7 weeks during which you will learn a problem-finding/solving technique called "Design Thinking."

A hotly contested term, "Design Thinking" is a way of focusing our problem solving skills not on the problems we identify, but rather on the users...on the human beings who are experiencing those problems. The basic skills we're building are called the [5 Aspects of Innovator's DNA](#): Connecting, Questioning, Observing, Experimenting, Networking

The last 10 weeks or so of class will be devoted to innovation and open-source learning. In this type of learning, you'll be thinking about the things that "bug you" and finding ways to dive into those issues, find problems to solve, and then work on developing real solutions to those real-world problems.

What might that look like? Well, the model here is Don Wettrick's Innovation and Open-Source Learning Lab in Noblesville, Indiana. Check out some of his [Innovation Videos on Youtube](#).

Another source of inspiration are the books [Creating Innovators](#), by Harvard Prof. and Innovation Lab director, Tony Wagner (Play the video there if anyone asks why you're taking this class!); [A Whole New Mind: Why Right Brained People will Rule the Future](#), by Daniel Pink; and [The Innovator's Mindset](#), by principal George Couros, of Canada. All these books are premised on the fact that DOING and MAKING, SOLVING PROBLEMS and BEING CREATIVE are key to our future success. Here's an image from *The Innovator's Mindset* that will let you know just why *EVERYONE SHOULD TAKE THIS CLASS*:

8 Characteristics of the Innovator's Mindset

By George Couros @gcouros

The innovator's mindset: The belief that abilities, intelligence and talents are DEVELOPED, leading to the creation of BETTER ideas. 💡

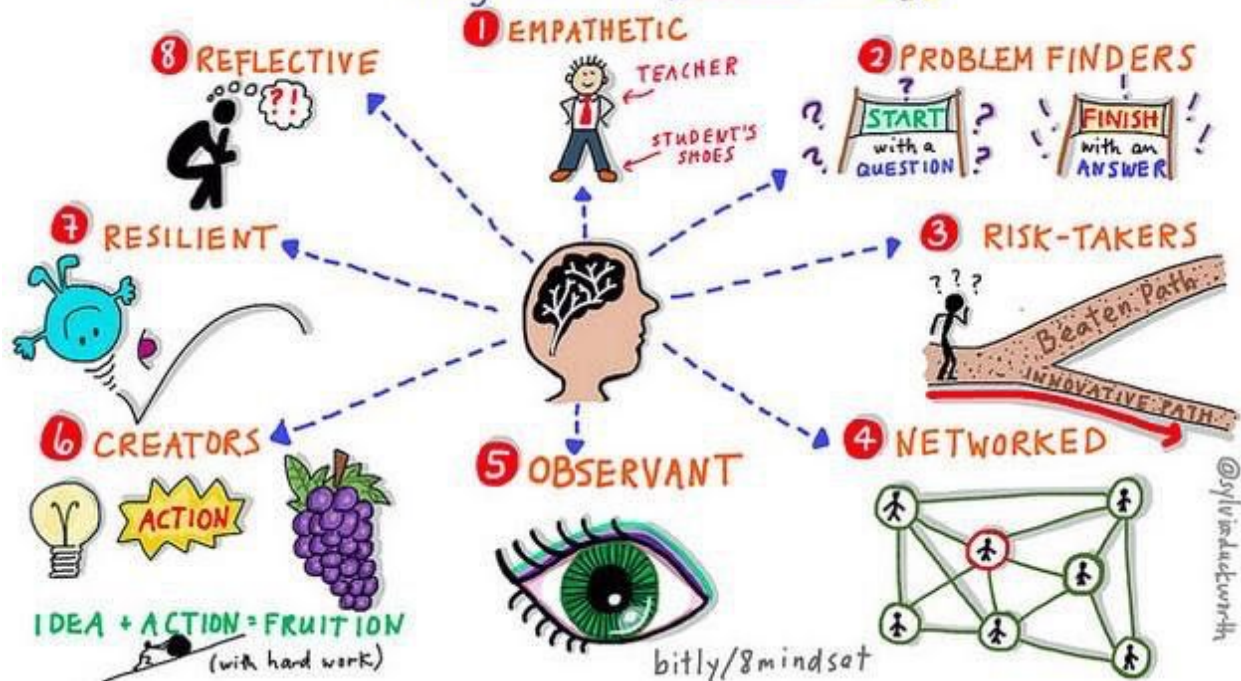


Image by Sylvia Duckworth (see twitter address in image)

One of the key takeaways here is this...you'll come up with ideas, but they may not always work, so **failure is built into the process**. However, you have to realize that failure is not an end-state. It is a huge opportunity to learn. Too often we see or are taught that failure is the end. That we're just not good enough, or we didn't "Make the Grade." That's not the case in Design-Lab. We see failure, to paraphrase Thomas Edison, as a discovery that something didn't work.

So by the end of the semester you'll have a solid understanding of how the design thinking process works, and you'll be collaborating, creating, communicating and thinking critically to solve problems the interest you and have an impact on the world around you.

Procedures and Technical Information:



You'll want to know just how you'll be graded and what you'll need to produce in this class. Well, first off, the aspect of "production" is key. You'll be making things here. Prototypes from cardboard, felt, and other "upcycled" materials, because one of our tenets is that we Build to Think. As Maria Montessori, the founder of Montessori education once noted, "The hands are the pathway to the mind." Design is a hands-on+minds-on process. But in Western society, we came to think, thanks to philosopher and mathematician, René Descartes, that only the mind matters ("I think therefore I am.")

Thanks to modern neuroscience and research into how we learn, we now know that's wrong. The entire body is the brain and its action in and interaction with the world produces the mind and thinking. Therefore, we're going to do a lot of sketching, building, taking apart, laying-out, graphic designing, and just about whatever it takes to use our "whole mind" to "make what we're thinking."

For a more traditional answer here, look to the next page

Grading:



As design is an iterative (think, “lather, rinse, repeat” except its more like, “design, test, reiterate, test again, etc”) your goal here is to go for mastery of a process in order to produce the best possible solutions to a problem. This has impacts on all the work you’ll produce as you’ll always be working towards a certain level of successful solution. We’ll track that mastery in several ways.

- **Blogging**--You’ll be keeping a blog to track your learning and document your thinking as you move through certain challenges. These are graded on completion and will occur once/week or more.
- **Digital Portfolio**--Your blog will become a digital record (using tabs or other menus) of your work. This will include images of sketches, projects, and reflections upon your work.
- **Digital Citizenship**--Pending parental approval, each student of design lab will have a Twitter account through which to connect to and share their work with other students and teachers. As well, we will be using skype, Google Hangouts, and other video conferencing methods to connect with mentors and others working on similar projects. This helps to break down the walls of school and truly democratize learning, putting the power of learning back into the learners’ hands.
- **Self-created Design Specs/Criteria**--All designs have “specs”, that is, criteria that they need to meet. As those criteria are unique to each project, and many groups/individuals will be engaged in different projects as we move through the year, *you will have to determine your own “Design Specs” and judge yourself on them.*
- **Reflection**--John Dewey, one of the grandfathers of American Progressive teaching rightly noted that “We do not learn from experience. We learn from reflecting upon experience.” With that in mind, all design projects will end in a short, **reflective essay** in which you discuss your learning, the obstacles you had to overcome, your process, and how you would judge your success.
 - We will also use Twitter and our blogs for rapid fire, condensed reflection.
- **Completion of Projects by Deadline**--This is a no brainer. Deadlines for projects are things we have to work for. In the real world, designers, engineers, problem solvers...they all have to produce “deliverables” by certain deadlines to show that their work and their project is moving forward. Even if you come to the deadline and say, “This isn’t working out...here’s what I’ve tried, you’re meeting the deadline.
- **Sketchbooks and Daily Rituals**--Creativity, the foundation for what we do in this class, is nurtured, tutored, and learned. We’ve created daily rituals, based on the work of designers and on *The Innovator’s Mindset* to help you develop and fine tune your own creativity at both the self expressive (artistic), and applied creativity (problem finding/solving) levels.

Content and Curriculum:

As mentioned in the “Overview” section, we’ve divided the class in two. Below you’ll find a list of the things we’re looking to develop in each section and how we’ll go about it. Remember, this is a prototype year. Failure is part of the process. So if at anytime you feel things are not working, that we’re moving too fast or too slow, let us know.

1. **First few weeks:** Getting to know Design Thinking as a way to find and work through problems towards a variety of solutions. This is the foundation for the work we’ll do and something you’ll want to grasp early on. We’ll be using the work of the world famous design studio, IDEO, as well as a phenomenal design educator, Mary Cantwell, who has developed an education friendly model called “DEEPdt.”
 - a. During this section we’ll be playing a good deal of games, reading articles, and getting to know each other.
 - b. Design is the best way I know to engage you in **The 4 C’s of 21st Century Learning:** Collaboration, Communication, Creativity, and Critical Thinking. So we’ll do a lot of team building games and Improv work to get comfortable with each other. However, we’ll also work through small challenges to build a working familiarity with the iterative process of DT.
2. **Classroom Redesign:** If you had Mr. Heidt in Middle School, you know that desks don’t work very well for him or the kind of class he wants to teach. Same is true for Mr. Komp. So the first large Design Challenge we’ll work through is focused on “The Learning Environment.”
 - a. You’ll be reading, watching videos, interviewing me, Mr. Komp, Gifted English Students, and yourself in order to find the problems with the learning environment in this classroom and redesign it to better meet the needs of GHEnglish students, Design-Lab students, and Mr. Heidt and Mr. Komp.
 - b. This will be a design sprint because you will be helping Mr. Heidt and Mr. Komp create evidence for a grant they want to write and present to the Perkiomen Valley School District Foundation. With that money and your visions, we’ll transform the classroom and learning!
3. **MSEast Library Redesign--** Mrs. Kratz, the Media Specialist at the MSEast Library Media center has asked if we had any interest in helping redesign the library. Wow! What an opportunity. We’ll be traveling up to the MS during 10th period and, perhaps, for a few days, a bit of time



after school, to get ideas, conduct interviews to understand the users, and also measure and get a sense for the space. We'll run through a module on Library Redesign put together by IDEO.org to help libraries all around the world better meet the needs of the 21st Century

4. **Open Source Learning**--By the time we're done these projects, you'll have internalized the DT process and can use it as you see fit to find problems that interest you and dig into understanding the human beings who have those problems with the goal of producing real-world solutions for real-world problems. Remember: *DESIGN IS NOT ABOUT CREATING COOL STUFF. DESIGN IS FINDING SOLUTIONS FOR HUMAN BEINGS WHO HAVE PROBLEMS.*
 - a. We'll use a scheduling method borrowed from Don Wettrick called the ROTH IRA:
 - i. You're coming up with ideas of things that bug you and hashing out those ideas with the class: REALIZATION, OPEN DISCUSSION, TUSSELE
 - ii. Forming groups to work on designing solutions (HOMOGENEOUS GROUPING). This will include Empathy, Understanding and Defining the problem.
 - iii. IDEATION/prototyping, REFLECTION (after two weeks), ADJUSTMENT.

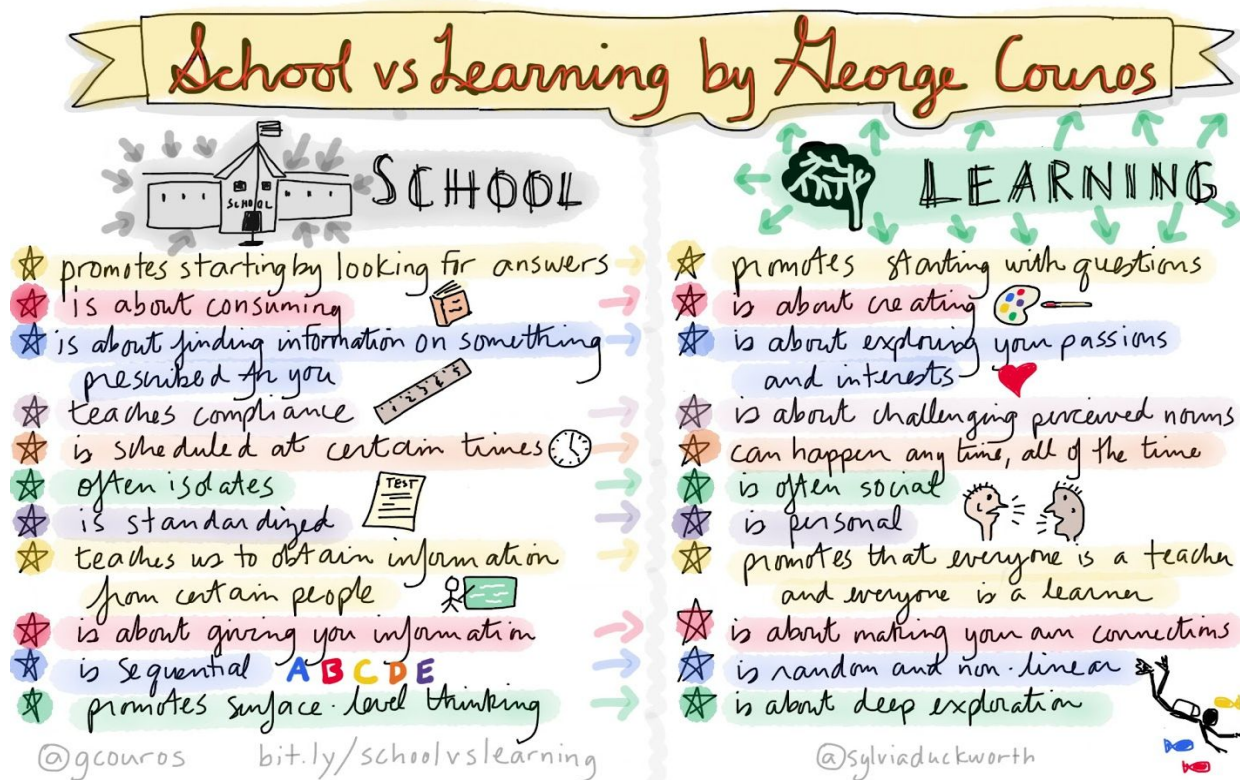


Image by Sylvia Duckworth

Final words (I swear):

In the end, there are two things I want you to take away from your experience here that are more meaningful than any other learning. And they are two questions, the two questions that guide designers and that, I hope, will guide you in all you do in your life. For if they do, you will have proven yourself the beneficiary of an education that honors a broad, liberal education not as an endstate (“Whoo hoo! Got my diploma. I’m so done with school!”), but as a tool for inquiry and which empowers you as an agent of change--a person who can and will make a difference in the world. And those two things are the following questions:

Why are things the way they are?

How can (i) we make them better?

Here are some things I’m thinking about to help us move this class forward for next year and to really empower you to take charge of your learning through designing your own education. Take a look!

Design Sprint Weekend:

([Read this article](#)) With the Tech Ed Dept., Computer Dept., Art Dept., the PV Community...everyone!

Participation in the STEAM expo, again:

As with the 20 time projects we displayed last year.

TEDx Perkiomen Valley:

There’s no reason why this couldn’t be done again. Perhaps an independent study project for the second half of the year? (Irina Koleva? Others...?)

Graphic Design Campaign for Change:

Potentially in conjunction with two young ladies who are working with me on an independent study, the campaign would work at a viral/guerilla marketing level (look it up...real cool stuff) to help initiate the change from “School” to “Learning.” The image below provides background: