In reading Dobson & Willinsky, I was struck by the following statements on literacies: "…New Literacy Studies recognizes the existence of "multiple literacies" and the social practices with which those literacies become associated. It is a movement that seeks to problematize what counts as literacy" (Dobson & Willinsky, 2009, p.15). I was drawn to the use of the term "problematize", thinking that this was a term to which I could relate. My life could be a case of "problematizing" situations as evidenced by comments offered by my colleagues, parents and spouse. But I then began to wonder about the meaning of the phrase, what the heck does it mean to "problematize"?

I turned to Google to help me better understand the concept. Wikipedia was a top result so I popped over there to get some clarity on the term. The Wikipedia page ended up a weak hit as the definition was confusing and poorly referenced:

> "**Problematization** of a term, writing, opinion, ideology, identity, or person is to consider the concrete or existential elements of those involved as challenges (problems) that invite the people involved to transform those situations.[1] It is a method of defamiliarization of common sense."

Online dictionaries didn't offer much help. But further searching led me to blog posts, discussions, and Quora and eventually connecting the definition to "analyze the problematic" ("Problematize" & Academic Discourse, 2016), where problematic is defined as:

> **"Definition of problematic**
> 1   **a** :posing a problem :difficult to solve or decide
>   **b** :not definite or settled :uncertain - their future remains *problematic*
>   **c** :open to question or debate :questionable" (https://www.merriam-webster.com/dictionary/problematic)"

With this foundation in place, I began to see that the point of ETEC540 is to problematize text, literacy, technology and society. That is, to see these topics as being unsettled, open to question and debate. In particular, I'm curious about how the educational system aligns with organizational and motivational approaches common in the world of technology and software-driven organizations. This is an important question:

> "As Christopher Little, a software executive and one of the earliest chroniclers of DevOps, said, 'Every company is a technology company, regardless of what business they think they're in. A bank is just an IT company with a banking license'" (Kim, 2016, p.xxvii).

Or more simply, "In short, software is eating the world" (Andreesen, 2011, p.1).

The implications of the role of software and technology changes how people organize, collaborate and ascertain success. For instance, "...with the development of postFordism or fast capitalism, more and more workplaces are opting for a flattened hierarchy" (The New London Group, 1996, p.66). In a world of agile organizations, lean and DevOps and where all organizations are software organizations, this rings particularly true. I'm currently prepping for a client session to discuss changes to their organizational structure. The client is transforming how they innovate, develop, deploy and support their software products. The goal of the session is to help them understand the perils of a hierarchical, silo-based approach and embrace collaboration, sharing, experimentation, and become a learning organization. The path forward has them breaking down silos and hierarchies and moving to matrix, product-based, or adaptive models.

An interesting thing that comes up when developing software is that the biggest challenges are typically not technology related. The biggest challenges are to get large groups of people to work together and successfully collaborate. These groups include the developers, business analysts, business representatives, clients/customers, quality analysts, UX designers, operations and support personnel. In such a conglomeration of people the skill of an individual is no match for the coordinated contributions of the group. Much like your favorite sport team – it doesn't matter how good the pitcher, quarterback or goalie is, if the rest of the team is not contributing. In addition, the "...old vertical chains of command are replaced by the horizontal relationships of teamwork. A division of labor into its minute, deskilled components is replaced by 'multiskilled,' well-rounded workers who are flexible enough to do complex and integrated work" (The New London Group, 1996, p.66).

Does the classroom of today prepare students to work in cross-functional teams? Is the idea of the T-shaped (or E-Shaped) individual something that comes up? Would the school system be viewed as a hierarchical, silo-based structure that values individual results over team work? At a minimum, we've segregated based on age and grade:

> "Idealists viewed high school as a place where youth could mature both intellectually and socially, but age segregation meant that young people were being socialized into a society that did not include adults. While peer socialization is obviously valuable and important, it is fundamentally different from being socialized into adult society by adults themselves; generations emerge and norms rapidly change per generation. By segregating people by age, a true dichotomy between adult and teen emerged" (Boyd, 2007, p.20).

How does a student that comes through such a system then transition to a flattened structure, where sharing, teamwork and multi-dimensional skillsets are critical to success? How could we get to better models of structure, assessment and behavior that support learning? Alexander, in discussing "Web 2.0 and Emergent Multiliteracies" offers that Web 2.0 could be part of the answer: "The ability to shift modes from open to closed networks is a multimodal literacy already flourishing in schools and homes" (Alexander, 2008, p.158). So perhaps, the ability to cross boundaries and effortlessly collaborate in open environments is already happening? And

if so, how do we guide it and contribute to enhancing its benefits? For instance, does a literacy related to Facebook transfer to literacy to interacting with GitHub or Stack Overflow? Similarly, can Design Thinking (Spencer, 2016) and a Lean Startup (Madda, 2016) mentality further enhance how we learn and the literacies that are developed?

References

Alexander, B. (2008). Web 2.0 and emergent multiliteracies. *Theory into practice*, *47*(2), 150-160.

Andreessen, M. (2011, August 20). Why Software Is Eating the World. Retrieved November 12, 2017, from https://a16z.com/2016/08/20/why-software-is-eating-the-world/

Boyd, D. (2007). Why youth (heart) social network sites: The role of networked publics in teenage social life. *MacArthur foundation series on digital learning–Youth, identity, and digital media volume*, 119-142.

Dobson, T., & Willinsky, J. (2009). Digital literacy. *The Cambridge handbook of literacy*, 286-312.

Kim, G., Debois, P., Willis, J., Humble, J., & Allspaw, J. (2016). The DevOps handbook: how to create world-class agility, reliability, and security in technology organizations. Portland, OR: IT Revolution Press, LLC.

Madda, M. J. (2016, July 10). How Teachers Can Run Classrooms Like 'Lean Startups' - EdSurge News. Retrieved November 12, 2017, from https://www.edsurge.com/news/2015-10-28-how-teachers-can-run-classrooms-like-lean-startups

Problematic. (n.d.). Retrieved November 11, 2017, from https://www.merriam-webster.com/dictionary/problematic

"Problematize" & Academic Discourse. (2016, March 22). Retrieved November 11, 2017, from https://tlakatekatl.wordpress.com/2016/03/22/problematize-academic-discourse/

Spencer, J., & Juliani, A. J. (2016). LAUNCH: using design thinking to boost creativity and bring out the maker in every student. San Diego, CA: Dave Burgess Consulting, Inc.

The New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard educational review*, *66*(1), 60-93.