Q & A with Jennifer Groff

Free, equitable, and quality learning environments at scale, are the foundation of a free and literate society. That should be the promise we deliver on for all young people. Yet, delivering on that promise in today’s world will require us to dramatically rethink what that can and should look like. Meaning, a significant departure from our conceptual models of “schools” and “education.”

For far too long we’ve drilled down into the data and science of education, at the cost of the larger vision of the ship and course we are sailing on. You might visit a school seeing significant gains in literacy achievement, yet learners there are developing very little in other critical competencies such as critical thinking, design thinking, systems thinking, and collaborative problem-solving. Yet perhaps even more importantly, are the learners in that school passionate? Excited about their learning? Able to articulate why they’re learning what they are, and how they intend to apply it in their lives?

These are traits I hope to see in all learners—and I do, in a small subset of the schools I visit. To get to a newly reimagined future of learning environments, we must leverage the plethora of research in the learning sciences over the past several decades. We stand on a vast body of knowledge about how people learn, that can and must be utilized to effectively and collectively redesign learning environments—in the way Finland and many other contexts have.

We can no longer turn a blind eye to the fact that the literature underscores that learners develop at different
paces in different pathways, and yet wonder why student achievement is still so low when we are delivering curriculum in a standardized progression.

You are well known for your work on using technology in schooling and education. In particular, you highlight the difference between using technology to evolve learning environments versus using it to transform learning environments. What is the difference between the two and what might be some necessary conditions that can allow for system innovations and the transformation of teaching and learning in the 21st century?

Today, there is an incredible range of learning technologies that can be utilized in learning environments. Many learning environments use new technologies to continue to improve and modernize how they teach and support learning. The introduction of these technologies may or may not have a positive or noticeable impact on how teaching and learning take place there; and when they do, their introduction unfortunately often does not induce much change in the rest of the learning environment (in terms of the overall organization of the learning environment). In our research framework, this has been framed as using technology to evolve learning environments.

However, as the sophistication of many learning technologies increases, a growing number of learning environments are using the opportunity created by the introduction of these technologies, along with the mindset of redesign, to rethink the overall organization of the learning environment holistically—and purposefully design a new, transformed model of teaching and learning, and the learning environment itself. We have framed this as using technology to transform learning environments.

Of course, you don’t necessarily need new technologies to do redesign, but they offer two advantages: 1) they help support opening up the conversation to this type of transformation and redesign; and 2) they afford possibilities of a new, transformed model of the learning environment that would not otherwise be possible. For example, with a new, powerful learning management system (LMS) that allows a school to capture and model learners’ development of competencies, separate assessments no longer become necessary—freeing up the curriculum and pedagogy to be more project- and competency-based.

How might this allow for a reorganization of the learning environment’s curriculum, schedule, and timetables? And as such, how the professional educator’s role and time are best utilized along with this technology? We can, and should be, deeply rethinking how core organizational structures we have used for so long in education (such as grade levels, timetables/schedules, the organization of curriculum and competencies, etc.) could look in today’s world to best support how people learn, how learners today do learn, and ways in which they need to learn in order to best prepare them for a new era.
Given your focus on redesigning the general curricula for the 21st century, what would be some major lessors we can learn from local and global changes in K-12 curricula?

There are a few critical lessons worth highlighting, and if we have learned anything from Finland, we can actually purposefully act on designing these into our systems. First, if you add, you have to subtract. Globally, we already see a trend of a bloated curriculum that too often results in shallow, linear coverage of topics. This goes directly against what we know from the learning sciences about how people learn deeply and meaningfully.

There is a range of ‘new’ competencies that are heavily endorsed as critical to today’s world—including systems thinking, ethical thinking, and social perspective-taking, and more—that collectively don’t easily fit into the existing curriculum structures. Yet, is a year spent on trigonometry in secondary school critical for most learners’ futures?

Second, even just the way in which you design and publish curricula and standards, impacts how they are implemented in everyday classrooms—in other words, what pedagogy ultimately looks like in schools as they enact those standards. For example, when Scotland’s newly revised national curriculum was introduced, teachers there emphasized that although they didn’t feel there were significant content changes, the way in which the standards were framed in the new documentation allowed them more flexibility, and to leverage project-based learning more. This interplay, looking at the relationship between how the curriculum standards are designed and then implemented needs to be studied more deeply.

Together, these first two points really lead me to the third, which is we need to apply the same redesign mindset to this pillar of the education system. High-quality education systems have already enacted this approach to a certain extent—with Alberta’s new national curriculum largely approached as a blank slate project from the beginning, and Finland removing all curriculum subjects, replacing them with ‘topics.’

All of this sits against the backdrop of an emerging tide in education: competency-based learning. What are competencies and how are they modelled? How might a competency-based approach inform a complete redesign of curriculum/standards? These are the aims we should be looking at—the answers to these questions will have a deep impact on what and how children learn in learning environments of the future.

Young people are the focus of educational change for improvement. What are the key needs of young people at this time and what might the field of educational change prioritize in order to meet these needs?

In short, they need deeper, more meaningful learning experiences, and overall learning trajectories that help them develop a range of competencies. Many learners do receive this to some degree, but a great majority do not—largely due to system policies and structures that prevent learning environments from supporting this type of pedagogy and overall learner development.
If we just listen to what learners have to say now, we can learn a lot about where we need to go: “Why do I have to learn this?” “I want to become a __________ (insert designer, engineer, etc.), what skills do I need to develop now and how do I do that?”, and too often, “This is boring.” A cartoon I often reference frames this well, it depicts a teacher standing in front of the classroom and says: “I expect you all to be innovative, creative, critical thinkers. Now sit down and do as I say.”

This disconnect is far too obvious in many schools. We have decontextualized curriculum, and taken away nearly all learner autonomy and agency. Not only does this directly go against what the learning sciences research demonstrates to be essential to learning, but it is no wonder that education has a huge dropout problem.

Yet, there is a range of innovative models that demonstrate a very different reality is possible. Two that stand out are: Lumiar schools, where learning is organized into projects based on learner interests and passions, and learner development of skills and competencies is modelled and managed in their Mosaic platform; and Open Classrooms, where learners pick a learning path of interest (e.g., software development) and engage in a series of strategically-designed projects that follow a learning path in order to develop all the competencies that need for that profession.

What do you think are the most important issues in educational change today? What excites you about the educational change field?

For me, it really comes down to the redesign of multiple aspects of the system that can no longer be incrementally “reformed” into where we want them to be. This includes what we’ve discussed here already, including the holistic redesign of the curricula/standards infrastructure, of whole learning environments, and even of the larger system structures that make up our systems of education.

What excites me most is seeing the potential for deep transformation by the emerging intersection of the movement towards competency-based learning, new and powerful technologies, and the redesign approach. Together, I think these create the ripe conditions for us to redesign learning at scale for millions of learners. Of course, this is multi-faceted, complex work—so we need more people and supporting organizations approaching the work in this way to see deep and lasting transformation.
JENNIFER GROFF

Jennifer Groff is an educational engineer, designer, and researcher, whose work focuses on redesigning learning environments and experiences through educational innovations and technologies. Currently, she is a PhD Candidate at the MIT Media Lab, and is the co-founder of the international NGO, Center for Curriculum Redesign.

Previously, she was the technology SME (Subject-Matter Expert) on the OECD Innovative Learning Environments project, and a US-UK Fulbright Scholar at Futurelab Education, UK, where she continued her work on system innovation. Previously, Jen was the VP of Learning & Program Development for the Learning Games Network—a non-profit spin-off from the MIT Education Arcade, where she led the development of assessment-based game design and the national Playful Learning movement.

A former K-12 educator, named one of 12 Microsoft Innovative Teacher Leaders in 2005, she is the author of numerous frameworks on innovation in education systems, transformation, and design over educational reform—including the i5 framework and the ‘whole-mindedness’ pedagogical approach.

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