# Learning on an Assembly Line

Educating the Masses: Goals & Motivations

If you recall your earlier reflection on a time you felt like you were really learning, let's see how that maps on to the dominant approach to schooling. We started with our goals for learning. When we reflected on a vibrant learning experience, we all had different and unique goals. Isn't this natural? We all have different interests and levels of expertise that make our learning goals unique. In schools, of course we'd dearly *love* everyone to be able to set their own goals, but how is that possible when working with not one, but many learners? If all students had their own goals, how would we help them? How would we know they were learning useful things? So, rather than *any* goals, setting a few goals for everyone to pursue makes sense. This is especially important because we're not just talking about the students in one classroom, but the tens of hundreds or thousands of students that a school *system* is responsible for. Remember, we're scaling to accommodate society's needs. And our society has specific needs and values, so being particular about *what's* learned is important. So we set specific goals in discrete areas to be sure all the important things are addressed. And when you think about it, aren't there many such important things? Of course we need reading, writing and arithmetic, then there's history and science, but also isn't it becoming apparent that students need to learn to be healthy, not to bully, or do drugs and to be resilient? What about all these new technologies? Surely they present gaps in students understanding that need working on as well! With all these important goals, it's sure getting a little crowded, isn't it? And being so crowded, as much as we'd love to (and really believe in the importance of people setting their own goals), as you can see, there just isn't time for that too! So if you have any of your own goals for what you want to learn, could you just set those aside for a moment (well, okay, 12 years). We're sure you'll find – because we've really detailed out all the important goals you'll need – that you'll actually be better off (later you'll appreciate that our goals really were better than yours). And you can relax, because we've spent a lot of time and money getting these goals just right so they are sure to last a lifetime (or until we decide that some other things that are actually more essential for every student to learn).

You get the picture don't you? To be concrete about it, here's what's happened to our full experience of vibrant learning: your goal could still be in the learning circle, but it's had to be constrained a little for the benefit of everyone (whose goals have also been similarly cramped, so don't feel so bad).
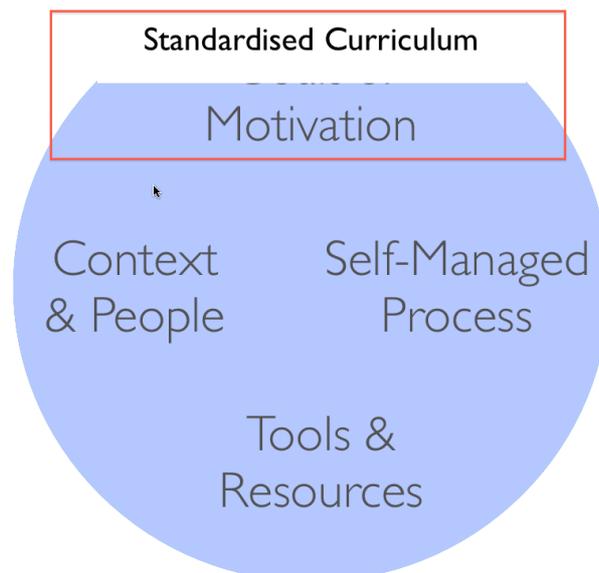
Educating the Masses: Tools and Resources

Now let's examine what a mass production approach to schooling has had to do to the tools and resources people might use to achieve their learning goals. Again, the kind of tools and resources people choose are as varied as the person and their goal. Sometimes the tools for learning are inherent in the task such as sporting equipment, musical instruments or specialized devices from crochet needles to metric wrenches. Similarly, the resources might spring right from the task such as language learning software, a repair manual or a collection of books gathered to review the topic. What they all have in common is that to be most effective, they are chosen by the user to suit ability levels and personal preference. Take a moment to recall how you or someone you know might feel about their tools and references. Isn't a particular instrument cherished by its musician? Doesn't the sportsperson carefully select just the right gear? Don't we honor the most useful books in our personal libraries? All of these become a part of us as we use them in pursuing a goal and enjoying the act of learning.

But what happens when our learning must be provided to the masses? We have already had to set aside individual goals as unmanageable and instead favored pre-specified and uniform goals to be shared by students in certain year levels and subject areas. Tools and resources were even trickier when the Assembly Line School was invented because resources were so scarce. There was the teacher, a "reader" and eventually textbooks. And these minimal resources had to be spread evenly across huge numbers of students. Technology had progressed from a bench and a slate in the small schoolhouses to a desk and inkwell in the industrial model. Eventually we got orchestra rooms, science labs, and eventually, all classrooms might be fitted out with TVs, calculators and a computer.

Standardised Curriculum

Motivation

Context & People

Self-Managed Process

Tools & Resources

Available Technologies
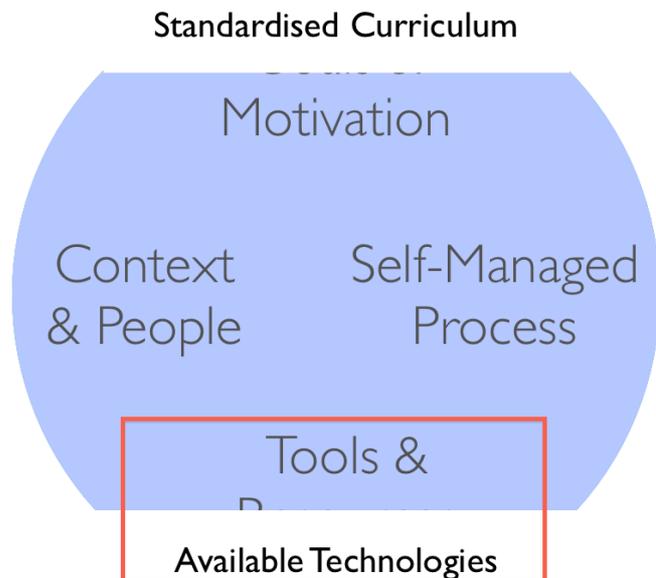
Overriding access to all these tools and resources was the laudable principle of equity: education was a "public good" and as such all citizens and their children deserved equal access: it would be unfair for one group of students to have something that others didn't. Thus, like goals – and all for good reasons – the tools and resources that an individual (like you!) might prefer must be limited out of fairness to the thousands of other students. So our access to resources and tools that could contribute to our complete, full feeling of learning – in order to allow it to scale – must also be constrained. Of course we want to provide every tool and resource available any where in the world, but limited budgets and the need to provide the same for everyone ends up reducing what's possible. We're sure you understand.

Educating the Masses: Context and People

You can guess what's coming, can't you? Just as "Goals and Motivations" and "Tools and Resources" had to be limited in order to package learning for large-scale schooling, "Context and People" gets the same treatment and for the same kind of well-intentioned and justified reasons. Imagine the range of contexts where individual's recalled learning may have taken place? When using this activity with groups of educators, people spoke of "Contexts" such as playing fields, theatre stages and overseas museums. And the "People" involved may have been a special mentor or expert who guided or inspired, or no one – maybe a little solitude was all that was required? Of course the context we have in last century's model of education is the school and classroom and the only real option related to people is teachers and other students. Imagine how the feel of your learning would change if it *had* to take place in a specific school and classroom at a time *not* of your choosing. At least a little constricting, right?
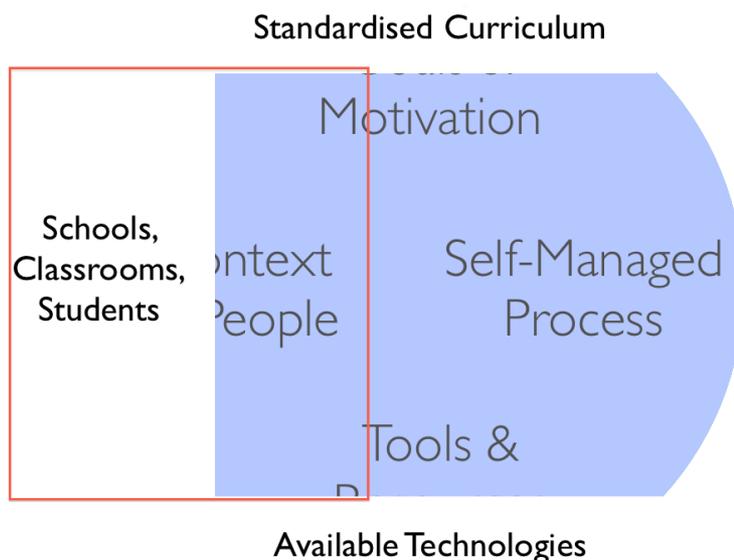
Educating the Masses: Self-managed Process

Recalling your positive learning experience, re-examine how the learning process itself unfolded. Your initial motivation and goals pointed you in a direction. Access to certain tools and resources may have contributed to your process. Maybe you had to source new information or equipment as you pursued your goals – goals that could have changed as the endeavor progressed. Finally, did the location or context change from beginning to end and were different people important at different times of the process? In a typical learning experience, we make many changes as we pursue our goal. Why wouldn't we? Each newly acquired bit of knowledge or skill changes who we are and what we're capable of. To feed the learning and maximize our potential achievement such changes are natural and
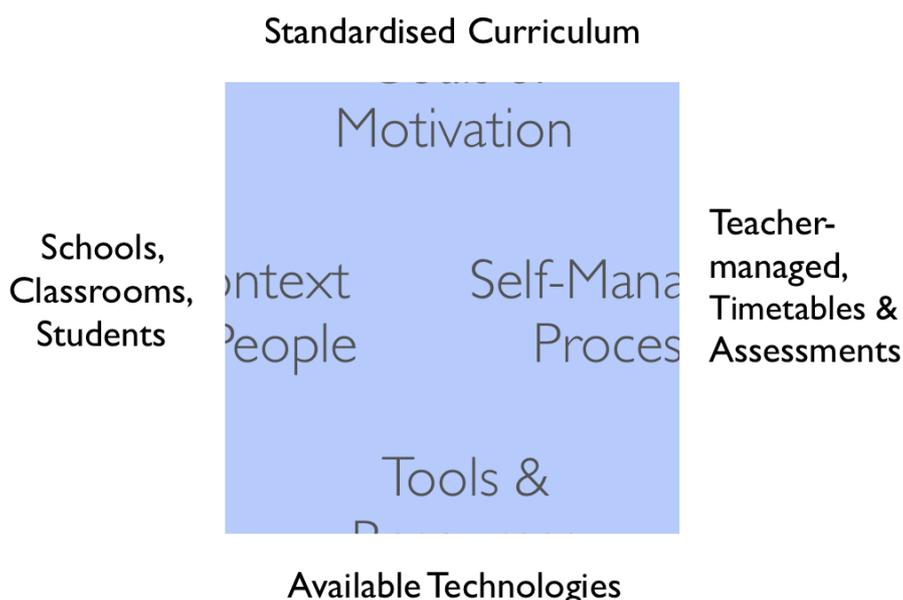
essential. In fact, this is where innovations often arise. But guess what? In last century's schools, not only did we get told what to learn with which resources and had to do it in this classroom at this time with only these people… we had to do it someone else's way. Which, to be fair, was the best the current situation afforded and we all did the best we could – some extraordinarily well. But imagine what even the best among us could have achieved if she managed her own learning process. Next imagine how those with distinct and idiosyncratic learning approaches might differ – the hyperactive, the fiercely independent, the talkers & leaders, the team-players, the single-minded & focused, the gifted, the damaged, and the "average." Oh, wait, "average" is a statistical concept, not a person. And yet this is *the* person for whom our curriculum, methods and standards are designed. These common, core elements are, in fact, an attempt to envision what all students should uniformly be able to achieve, but to do this we had to create some fictitious student across a range of ages upon whom we *inflict* a predetermined learning process. Ouch.

Yes, "inflict" is a strong word, but look how it typically transpires. With the learning goals fixed firmly in place as curriculum, subjects, year levels and standardized outcomes we then provide only access provided to uniform resources and a well-intentioned single teacher in one classroom with a random collection of peers, and the we use a common process like this: a learning topic is announced, information presented, tasks assigned, work collected, feedback given, tests administered, graded and returned. Then… Next! The ~~curriculum~~ *assembly line* moves on relentlessly. We are left with looks like this:
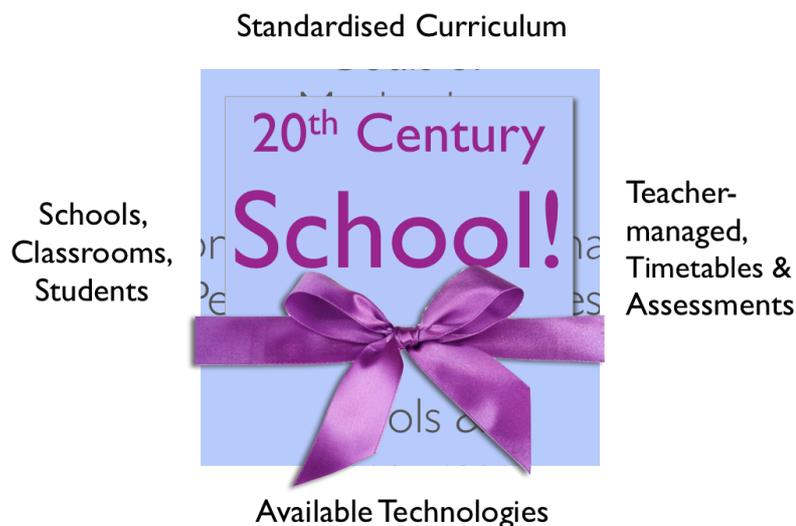
We dress it up as much as we can with new curricula, technologies, friendly furniture and "learning-centered" approaches, but it's still "learning in a box." Is this even in the *same reality* as what you do when you learn for yourself? Honestly, which of the four constraints would you choose to apply to your own learning if you wanted to achieve your best?

The problem is that the little bit of trimming needed to make learning practical at large scale during an earlier era comes at a cost. As we just experienced, what's eliminated from an authentic and full learning experience is everything that makes learning personally meaningful. Goals are fine, but if they aren't mine, they don't motivate. Tools and Resources are great, but if they aren't mine, they don't become an extension of me. The Context and People of schools can be wonderful, but if my voice is hushed and my choices subordinated

to the group, it's not really my place. Finally, if someone else determines and judges my

What's the missing bit?

My goals & motivations

The people & places that help me learn best.

My unique learning processes.

My tools and resources.
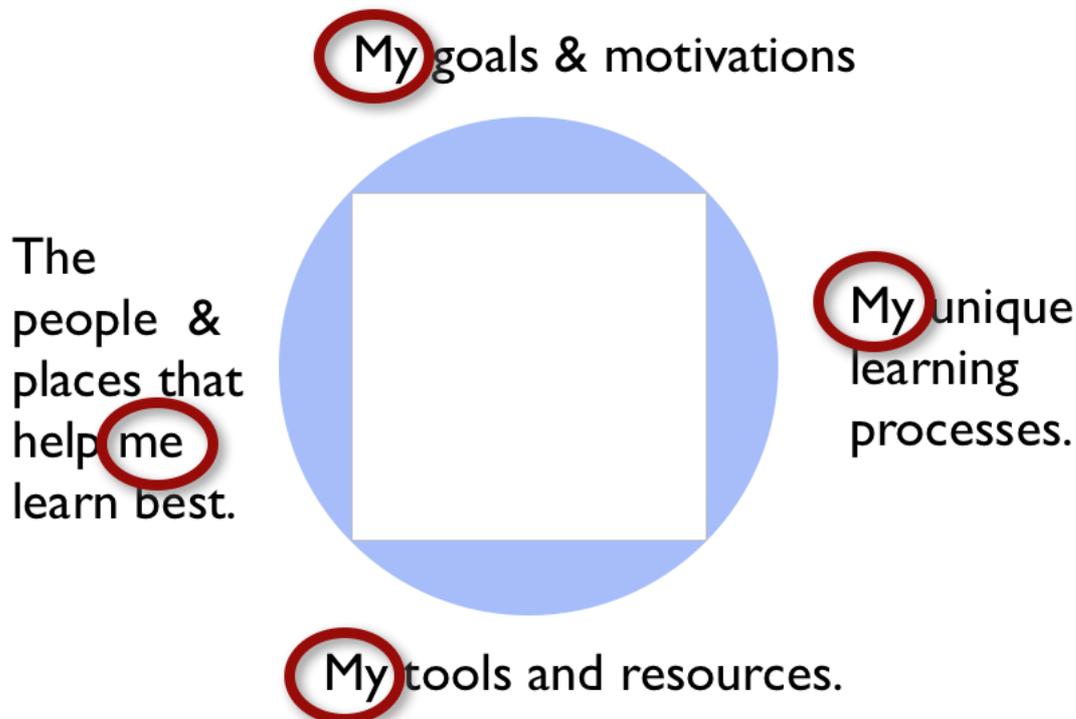
learning, how is it mine?

Which finally leads us to what must be our beginning: any attempt to improve "school" must begin with the understanding that our dominant approach – the one we all attended and many of us learned to be successful teachers in – that this whole, limiting framework is merely a human construct. A construct designed to address the needs and resources of the 20th Century, an era when basic skills were the learning goal and rich resources were limited. What "schooling" is not – and never was – is "learning," at least in its full, rewarding, and joyous sense. This was never the 20th Century intention. The point is that what we created during a century of refinements is a solution for a world of limited resources that no longer exists. A situation directly contrasting the current era when advanced skills are required and rich resources abound – no wonder we refer to them as "disruptive" technologies – they do "throw a wrench" in the works of the assembly line. But imagine what they could do for learning?