Most education reforms start with the premise that adults need to work harder so students will learn more. But ultimately, maybe quickly, that premise is self-defeating. Regardless of the pedagogy used, who governs the school, or how long teachers toil, students are the real workers in the system. Building around that reality is one of the five key elements to bring about Learning 2.0, the next full-scale version of public education.

Thinking of students as education workers invites us to consider them as producers rather than consumers of education. In truth, of course, they are both. Outside of education, and particularly in medicine, the system has recognized that good outcomes depend much more on what clients do than what professional practitioners do. The “prosumer” relationship, as futurist Alvin Toffler called it, is built into integrated health care systems.

Health maintenance organizations provide their clients with handbooks and web sites for self-diagnosis and treatment. The standards of professional care are available to clients and their advocates. Rather than threatening professionals, building client knowledge allows a more productive and deeper relationship to exist between patient and professional.

If students are the real workers in the education system, those who design public education need to ask what sort of responsibility is reasonable to ask students to take for their own education, and how the system should be constructed to best motivate students to take such responsibility.

The phrase “student as worker” was popularized by the late Theodore Sizer to counter the common perception of a teacher as a deliverer of instructional services. In Sizer’s Coalition of Essential Schools, student-as-worker is associated with a coaching or guide-on-the side kind of teaching in which students themselves grapple with projects and problems.

But the notion of student-as-worker extends beyond the always-charged discussion about coaching versus direct instruction; it asks how student motivation can be increased in the design of schooling.

**MOTIVATION AND THE EQUATION OF LEARNING**

Motivation is the third element in the equation of learning: Learning= f(Content, Time, Motivation) and is the most underutilized of the three in education policy.

Students understand that their “job” is to go to school. They come to school because they are required to, and in most communities the behavior is socialized, but in a great many cases the job that students are trying to do in school does not
involve education. "The job" may be seen as having fun, hanging out, socializing. After a two–week tour of a western country’s schools, a Chinese educator reported: “I understand now; school mostly social.”

Yet, at the core, students want to be successful in something. If they can be successful in school, they’ll take that. Success in education will be the job that they want to get done, but there are always attractive alternatives, which puts a premium on the design of education. Clayton Christensen and Michael Horn ask: “How do schools fare against these competitors as something that students can hire to be successful and have fun with friends? Miserably in many cases. The primary mechanisms in most schools for doing these jobs are explicitly separated from education. Activities such as athletic teams and musical and dramatic arts performance groups, which are mechanisms for feeling successful and making progress, are “extracurricular” activities rather than “curricular” ones, which speaks volumes.”

The Chinese educator tells students a story: study hard, succeed in school, and you will have a better life. Guaranteed. That guarantee is much harder to sell in an affluent country, and it is becoming much less sure, so the meaning of success needs to be embedded in doing a meaningful job in school.

The task of schooling needs to be rewarding in itself. Mihaly Csikszentmihalyi, who studied the psychology of optimal experience, which he calls Flow, “the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it.”

But these psychological highs are the rewards for concerted effort. “Contrary to what we usually believe, moments like these, the best moments in our lives, are not the passive, receptive, relaxing times.... The best moments usually occur when a person’s body or mind is stretched to the limits in a voluntary effort to accomplish something difficult and worthwhile. Optimal experience is something we make happen.”

Educators have sought the holy grail of creating motivating experiences for more than a century, but the batch process structures of schooling make it difficult to build in flow. The bones and muscle of schooling believe that it is their job to deliver instruction rather than build an education system that will motivate students to choose education as the reason they come to school.

Consider the three conditions necessary to create Csikszentmihalyi’s optimal experience:

- being involved in an activity with a clear set of goals that in themselves create structure,
- a good balance between the task at hand and one’s perceived skills, and
- immediate feedback.

"FLOW" AND BATCH-PROCESS SCHOOLING

These conditions are hardly ever present in the industrial-era, batch processed school. Other than “get the assignment finished,” immediate achievement goals are hard to come by or they appear meaningless to students. Matching skills and tasks is hard so that inevitably a large chunk of the class is either lost or bored out of their skulls. Feedback comes with long delays at the end of the week, unit of study, or in the case of standardized testing, sometime in the next school year.

HIDDEN PATHS TOWARD SUCCESS

Too frequently the goals, and the pathway to them are hidden. For students to use school for the job of learning, they and their families need to know the secret codes of education success. Students would know what one had to do to get into college. Students and their parents would know how to transition from English Learner status to fluency. Students would know how to get help and where to get it. Professional class families often transmit these codes because educational achievement has been part of their own experience. It’s tougher for poor and working class families. School-based programs can convey some of the
codes, and there is strong evidence that such programs increase graduation from high school and transition to higher education.

Programs such as the Society of Students, begun by teachers in the Boyle Heights community of Los Angeles, teach resilience, social-emotional skills, and aspiration to elementary students. AVID has spread to schools throughout the country. And a number of donor-driven programs, such as Bright Prospects, which serves students in the Pomona, California, area, have a good track record in successfully lighting the pathway through college.

As beneficial as they are, all these programs are indicators of systemic failure; if the core structures of schooling performed as they should, the secret codes would be built into the system for everyone, not as special programs.

Balancing the difficulty of the task to perceived ability, the second element of optimum performance experience, is usually handled through ability grouping, but the technique leaves a lot of students behind convinced that they are dumb, and their performance usually fails to meet the increasing lower expectations of the class: a race to the bottom.

**CREATE INTERESTING PROBLEMS**

But better designs are within reach. The secret is not to create success all the time, but to create interesting problems. Cognitive psychologists, as well as computer game designers, are building adaptive technologies that build in repeated trials, and lots of tough, interesting problems on the way to ultimate success. Daniel Willingham likens the process to a novel with tension and plot twists every few pages to keep reader interest as the ultimate resolution of the story drama moves to a conclusion.

Adaptive technology does not have to reside within a computer. At High Tech High in San Diego, most courses are qualified as honors courses. Students of all abilities take these courses. Each student decides whether they want to do “honors” work, attempt the hard problems. Some don’t, but many change their perception about what they are capable of.

If students are to be motivated as workers in the educational system they also need immediate feedback about how they are doing and what to do about it if the results are not what they want. Adaptive computer technologies may help here, but computers are not necessary.

At the project-based learning schools I have visited, students got rapid feedback both because the structure of the project required student critiques, sometimes with adults and sometimes with other students. But most often students knew whether something was working or not because of the project itself. The work told the worker whether he or she had been successful. Adaptive technology built into games provides immediate feedback and task adjustment. That’s good educational design.
