

## Necessary Steps in the Transformation of Education in the United States

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There are two separate facets of the problem with the education system today: problems that plague it, and elements that are missing. Indeed, fixing the education system requires nothing short of a complete rethinking and rewriting both of how we teach and how we assess.

In order to fix the problems that plague the education system in the United States, a number of steps must be taken to correct several serious issues. Any changes made without first dealing with these issues cannot achieve the desired results. On top of that, we must add the missing elements in a meaningful way.

Before we think about the educational system itself, we should reexamine how important it is and allocate appropriate resources. We need to get beyond the point where funding is cut every time budgets are under pressure. We as a country need to place a much higher value on educating our children. I am not referring to the actual dollar cost (it can be argued that we are not getting a sufficient return on our money), but to our elected officials' willingness to cut funding whenever there are budgetary shortfalls.

#### Eliminate Grades

Grades are the single most destructive influence on education. Students - even the best students at the best schools - (mis)place their effort on grades and as a result their learning takes on a short-term focus as it is geared towards getting the grade instead of understanding the material. Meaningful, comprehensive standards encourage students to learn and understand the material.

The use of standards requires assessments that encompass all of the elements of the standards. Such assessments are by necessity comprehensive and allow students to demonstrate their understanding. Another way to approach this is competency-based assessments. A test must not be the final say on a student's understanding; the point is to achieve the understanding, not that it is done by a certain date.

All major assessments should be project based, i.e. we must assess for understanding and not for factual knowledge. Teachers must have the time to provide substantive feedback so that learning does not end with the test. Standardized tests can never be a meaningful way of assessing true understanding. By using fill in the blanks, matching, and multiple choice questions, we shortchange our students. A good assessment is in and of itself a learning experience.

#### Multidisciplinary Courses

It is time to stop artificially separating learning into narrowly defined subjects and instead recognize that everything is linked and connected. STEM represents a good start; STEAM an even better one. But rather than starting with the academic subjects, we should start with an area of study. A school near a river might take the river as the subject and explore all the areas that touch upon it: ecology; chemistry; civics; transportation; environment, etc.

Project-based, or problem-based, learning (PBL) is one way to increase the depth with which we approach subjects. It also has the benefit of introducing to students real-world issues that are more likely to engage them because they are relevant and meaningful. Students are disinterested in school because the education they get is not relevant to their lives. Content must be presented in ways that makes it relevant to students' lives and to the world we live in.

#### Out with Competition; In with Collaboration

School now sets up a competition between students, but the real world gets things done through collaboration. Students learn better when they learn from each other, so we must change our system to emphasize and value collaboration. PBL promotes such collaboration, and indeed technology today provides the means to collaborate with others regardless of where they are.

Technology, pervasive in the world, must also be pervasive in our schools, not as an add-on but as a seamless part of everyday teaching and learning. We must begin by training teachers adequately, and then suffuse schools with appropriate and meaningful use of technology. For example, every student should complete high school with an online portfolio demonstrating his work and competencies.

At every school, all course and related resources should be available through course websites in order to make use of freely available resources, give students more control over their learning, and allow for greater individualization. Students, too, should contribute to course websites and thereby benefit each other and students who subsequently take the same course. In order to truly strengthen the entire system, all of the course materials should be publicly available so that teachers can collaborate with and benefit from each other.

### Global Education

We live in an increasingly connected world and can no longer pretend that the rest of the world is less important. A well-educated student should understand and be respectful of other cultures and be proficient in a second language. These skills can only come from both studying and direct experience. Where possible students should have the opportunity to spend time in another country as part of their education. Short of that, technology again provides the ability to virtually experience the world.

### Get Out of the Classroom

The classroom is an artificial space we have created in schools, and it does not promote learning. Move the center of education from the classroom to the library, which should become an information commons not just of books, but of all sources of information.

### Umbrella Curriculum

The final piece of the education puzzle is an umbrella curriculum that stretches from Kindergarten through 12th grade. It is not enough to have curriculum for each subject and grade. The scope of education must reach beyond the subjects we teach in class. High school graduates should be able to stand up in front of an audience and give a presentation; they should be able to defend their point of view; they should act ethically and responsibly, etc. These skills may not automatically result from an education that does not intentionally include them, and so a curriculum is necessary that addresses the skills and knowledge outside of the standard coursework that we believe is important for our children.

An example of this is public speaking. Only if students are required to stand up in every class and give a presentation will they learn to do so over the course of their education.

### Professional Development

Education does not end with the student. Teachers, too, have to continue learning, and so every school must be a professional learning community. Someone - the dean of faculty, the academic dean, the principal - must intentionally promote continuous learning by making it part of the school life, looking at pedagogy, assessment, curricula, technology, etc. through ongoing conversations and discussions both inside the school and with people outside. Professional development must be an ongoing priority with each teacher having a personal learning network.

Meaningful discussions should begin in the classroom as both administrators and other teachers sit in on classes regularly, not to evaluate but to give substantive feedback. Such conversations should continue in ongoing professional development.

Evaluating teachers should be part of professional development. The formal evaluation of teachers, when it does occur, must not be limited to sitting in on one 45-minute class, but instead should stretch over several consecutive classes to get a real feel for the teaching process and a true understanding of the teaching and learning that is taking place. Only in that way can administrators and coaches help teachers grow and improve.

