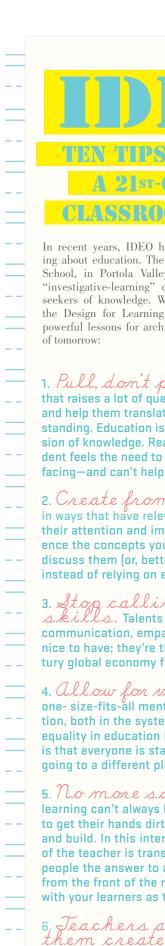
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In recent years, IDEO has spent a lot of time and effort thinking about education. The firm's work with Ormondale Elementary School, in Portola Valley, California, helped pioneer a special "investigative-learning" curriculum that inspires students to be seekers of knowledge. We spoke to Sandy Speicher, who heads the Design for Learning efforts at IDEO. Her insights provide powerful lessons for architects and designers creating the schools of tomorrow:

1. Pull, don't push. Create an environment that raises a lot of questions from each of your students, and help them translate that into insight and understanding. Education is too often seen as the transmission of knowledge. Real learning happens when the student feels the need to reconcile a question he or she is facing—and can't help but seek out an answer.

2. Create from relevance. Engage kids in ways that have relevance to them, and you'll capture their attention and imagination. Allow them to experience the concepts you're teaching firsthand, and then discuss them (or, better yet, work to address them!) instead of relying on explanation alone.

3. Stop calling them "soft" skills. Talents such as creativity, collaboration, communication, empathy, and adaptability are not just nice to have; they're the core capabilities of a 21st-century global economy facing complex challenges.

4. *Allow for variation*. Evolve past a one-size-fits-all mentality and permit mass customization, both in the system and the classroom. Too often, equality in education is treated as sameness. The truth is that everyone is starting from a different place and going to a different place.

5. No more sage on stage. Engaged learning can't always happen in neat rows. People need to get their hands dirty. They need to feel, experience, and build. In this interactive environment, the role of the teacher is transformed from the expert telling people the answer to an enabler of learning. Step away from the front of the room and find a place to engage with your learners as the "guide on the side."

6. Teachers are designers. Let them create. Build an environment where your teachers are actively engaged in learning by doing. Shift the conversation from prescriptive rules to permissive guidance. Even though the resulting environment may



As part of an in-depth investigation into bird adaptations, first-grade students at Ormondale Elementary School used various household tools to determine which beak was most effective for cracking open plastic eqqs. They then designed birdhouses for the mock birds.

be more complicated to manage, the teachers will produce amazing results.

7. Build a learning community. Learning doesn't happen in the child's mind alone. It happens through the social interactions with other kids and teachers, parents, the community, and the world at large. It really does take a village. Schools should find new ways to engage parents and build local and national partnerships. This doesn't just benefit the child—it brings new resources and knowledge to your institution.

8. Be an anthropologist, not an archaeologist. An archaeologist seeks to understand the past by investigating its relics and digging for the truth of what was. An anthropologist studies people to understand their values, needs, and desires. If you want to design new solutions for the future, you have to understand what people care about and design for that. Don't dig for the answer—connect.

9. Incubate the future. What if our K-12 schools took on the big challenges that we're facing today? Allow children to see their role in creating this world by studying and creating for topics like global warming, transportation, waste management, health care, poverty, and even education. It's not about finding the right answer. It's about being in a place where we learn ambition, involvement, responsibility, not to mention science, math, and literature.

10. Change the discourse. If you want to drive new behavior, you have to measure new things. Skills such as creativity and collaboration can't be measured on a bubble chart. We need to create new assessments that help us understand and talk about the developmental progress of 21st-century skills. This is not just about measuring outcomes, but also measuring process. We need formative assessments that are just as important as numeric ones. And here's the trick: we can't just have the measures. We actually have to value them.