

Teaching Your Way Around the World

Teachers and administrators share their experiences in international schools around the world

The importance of context, challenge, and exploration so students find and build on their own strengths

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For several years, I had the opportunity to regularly put ideas into practice during the day and debrief them after dinner with my good friend, Bill Tihen.

It turns out Bill is, as I jokingly yet seriously remind him from time to time, one of the greatest curriculum theorists I've ever met. Bill is unique in that he is a former AP math, computer science, and physics teacher, with additional backgrounds in electrical engineering, building industrial robots and their software, and two decades in IT at schools. He also taught experimental classes in our middle school a few years ago.

Bill recently met Bret Thayer, a visiting scholar at our school and a fellow agilist. Bret teaches AP Seminar and other courses in Colorado, using Scrum (one of the most well-known operationalizations of agility). I invited Bill to meet Bret, and the ideas their meeting sparked led to longer conversations on several themes related to Bill's experimental classes. We'll start here with reflections on *exploration, context, and challenge*. In future blog posts we'll look at *pull vs. push, uplift, and assessment*.

"I like to have the students learn in short iterations that are just beyond their current knowledge or comfort level," says Bill. "When they make that small step forward, they are ready for the next iteration, which is again just beyond their current level. Taken all together, they can move well beyond where they started." For me, trained in second language acquisition, this is like Steve Krashen's notion of $i + 1$. While it may seem obvious that we should teach just a bit beyond a student's current level, it's advice not always followed well. It's also difficult with a group of students, all at different levels – at least in traditional teaching models.

Bill's preferred model is to create teams of students which explore small aspects of a bigger objective, increasingly building their knowledge as they work and reflect, and then work and reflect some more. He places a premium on students learning from each other before coming back to him as the teacher. This is a more complex version of $i + 1$, perhaps a more Vygotskian notion of students learning just beyond their current level by working with a more able peer, or what we are familiar with as the zone of proximal development.

"Smallify," Bill says, and then those little chunks of learning just beyond a student can be worked out in collaboration with another student, or when necessary, in collaboration with the teacher. If the students and the teacher reach a point where there is no clear next step, that is simply further opportunity for authentic learning, Bill thinks. Moving into the unknown and letting students see that the teacher doesn't know everything is important. It gives students a chance to work outside the usual space in which the teacher knows and the students don't. In this space there is genuine exploration – and quality learning. Can the students and teacher now discover, together, the right questions to make the unknown more known?

Bill believes that teachers should do very little direct instruction. "Let kids work until they get a bit stuck, and then be patient and help them get unstuck." I picture here a parent at the kitchen table, next to a child doing homework. The parent lets the child work until the child is stuck, The wise parent doesn't tell the child the solution or take the pencil and write in the correct answer. Instead, the parent offers just enough encouragement to keep the learning moving forward. So, too, should the teacher behave, Bill recommends.

To help them own their learning more, Bill suggests that students track what they learn in a project journal so each team member can know what the other team members have done. He reviews the journal with students to help them reflect on what they do well so they can do more of that, feeling successful as they go.

Bill as teacher will occasionally look at the journal and ask students in the group to explain what other students have researched. If one team member doesn't understand what another team member is doing, then it is up to that more able team member to make sure everyone understands. Vygotsky again, though Bill just shrugs. "It's OK by me if someone already thought of that," Bill says, then adds, "If it's part of teacher education, then we should probably expect to see it more often."

"Look," says Bill in summary, "every project needs to involve complexity. Too often we make projects so clean for students that they aren't confronted by the necessity of making a compromise. But the complex compromises students have to make to reach a goal lead to deeper understanding. Choosing between multiple possible solutions requires a good understanding of what you are doing. Having a context for learning that creates authentic problems to be solved, with no simple Google answer, provides students those difficult choices." I tell Bill that a current term for this is "productive struggle."

Bill thinks that's great. And that teachers should help guide their students into exactly that space just a bit more often.

Next up, with inspiration from Bill: *pull vs. push*, a concept central to working with agility, and a remarkably tall hurdle for us in school.



About Paul Magnuson

Several years ago, Paul Magnuson founded a research center at the high school level in collaboration with colleagues at Leysin American School. The center supports professional learning through a variety of programs, including year-long action research projects by faculty who receive competitive resident scholarships. In addition, the center works with schools and universities around the world, hosting 10 to 15 visiting scholars annually, and consulting and presenting at schools and other organizations. Paul has created a number of tools and programs, including classroom observation schemes, language immersion summer camps, the middle school at LAS, and most recently, edge, a high school program which offers an alternative to traditional school through greatly increased student agency. His current interests are the documentation of edge, pulling agile into education, and self-regulation for both students and teachers.

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