

Teacher Collaboration as the Key to Our Students' Futures

It's become clear to me and most other teachers that in order to prepare youth for the increasing demands of the workplace and the complex issues of our time, we need to be more innovative in schools and classrooms. And, in my experience, effective innovation is much more likely when teachers collaborate.

A **Framework for K-12 Science Education** describes a coherent vision of what this science education could look like. Yet making this a day-to-day reality for every student is on the shoulders of teachers. I am fortunate to be part of a district that supports teacher collaboration and I have seen its positive impact on my students. My colleagues and I have collaborated to develop rigorous, engaging projects that pull students into learning physics, build their skills with computer programming, give them opportunities to write for targeted audiences and develop their own collaboration skills.

One example of this collaboration is our Texting and Driving Project. This project originates in my students' health class when they are discussing healthy decision making. Their health teacher asks them to estimate the distances involved in a typical texting and driving incident. When they come to my class, they ask how they could get a better estimate, which contextualizes our learning of motion and gives them a real world connection to why they need to learn a rigorous, mathematical-based understanding of physics in ninth grade. My collaboration with teachers across my district, across my state through the Oregon Science Teachers Association, and across the country through the Knowles Science Teaching Foundation, has allowed me to cooperatively create, innovate, and support students to be successful with this project, something I would never have been able to accomplish alone. Through our collaboration, we have developed supports so my students can extend and enhance their learning by programming a simple app that *customizes* the estimated distance to a person's texting habits, reaction time, and driving context. This programming hook gets my students learning the basics of computer programming. When programming in the mathematical models we develop through experiments, it gives them another way of thinking about the equations we use. I have found for many of my students who struggle in their math classes, the computer programming helps them to finally make sense of the mathematics.

The work and numerous supports that are needed to develop and implement these type of projects is overwhelming to a single teacher or even a small group

of them. Collaborative networks of educators, that ideally include a broad range of education specialists, can share the work and bring the creativity needed to support all the different needs of the learners who teachers work with daily. Units such as the Texting and Driving Project cannot just be canned and given to other teachers to do, but it can be shared, as it already has, and have a profound impact on students across my district and state.

Teacher collaboration and networks of collaborative teacher groups are already creating the innovation we need to best prepare our youth for their futures and teachers, administrators, and the education system need to continue to expand them.

*Each week, beginning on September 12, members of the KSTF community will be **writing about one of the characteristic actions of teachers acting as primary agents of educational improvement**. This week, we're writing about teachers acting as primary agents of educational improvement when they work collaboratively with other teachers to initiate, own, and critically evaluate improvement efforts that benefit their own students and have the potential to ultimately benefit all students.*