

DAVID ROSS: REFLECTIONS ON SHAPING – AND NOW TEACHING – PROJECT-BASED LEARNING



David Ross is a global education consultant and former CEO of the Partnership for 21st Century Learning (P21). After holding national and international education leadership roles for 15 years, in August of 2019, Ross returned to the classroom to practice what he had been preaching. He teaches sixth graders at Technology Middle School in Sonoma, California.

Why did you return to classroom teaching?

I had drifted farther and farther away from life in the trenches. And as schools changed and kids changed – I call it the practice gap – I think people like me who get national prominence in a field, especially education, drift farther and farther away from the daily experience of the classroom teacher. . . . I think being back in the classroom has made me rethink and reexamine all the things that I firmly believed. And some of them need to be reformed. They weren't very accurate. I think we – I and others – significantly underplayed the importance of scaffolding. We significantly underplayed the difficulty of doing project-based learning in impoverished neighborhoods, so I'm glad I came back.

Where did PBL begin?

Most of the work originally started in high schools and then migrated back down into middles and elementaries. But, if you look at the models like Expeditionary Learning, the New Tech model, Big Picture, and all of them, they're top-heavy with high schools. I think part of it's developmental in the sense that kids are more effective as communicators and collaborators when they get older and they also have more knowledge. But, on the flip side, in elementary school, it tends to be more inquiry-based approached. So, there's no sweet spot.

Considering the current pandemic, can PBL be delivered online?

The biggest challenge is getting devices in the hands of all students, getting Wi-Fi to all students, getting curriculum online, training students how to use the devices and software, and training the teachers how to provide instruction and assessment online. Once that is accomplished, we have to train teachers how to use technology to set up collaborative work environments and train students how to collaborate

effectively online. Once all of that is done, we can do PBL online. Business has been doing this for a long time. It is a brave new world for the vast majority of students and teachers. There is a long, bumpy road ahead of us.

Are most teachers prepared to deliver PBL?

The challenge of this is where teacher education comes into play. Universities, for the most part, still use a traditional instructional model. . . . So, you've got university teacher education programs that very much teach in a traditional model. One of the challenges for 25 years in the project-based learning world is to work with teacher-accreditation programs so that they actually embody project-based learning so that the teachers are prepped; otherwise, you've got teachers trained in traditional instruction thrown into PBL schools, and they're not ready, or thrown into traditional school until, "Oh yeah, we're pivoting to PBL," so you've got to retrain your workforce, and that's time-consuming and expensive. So, we really need to pivot the teacher education models.

Explain why PBL requires patience from educators and administrators.

You have to be patient. People don't want to hear that because we live in an instant-gratification world. You buy something on Amazon and get the delivery the next day. And so, if they have somebody like me come in and say, "Oh, yeah, I'll train you today but it's going to be five years before you get good at it," people don't want to hear that.

How is PBL a significant deviation from traditional education?

Some people are very successful at traditional instruction, but traditional instruction meets the needs of fewer and fewer students anymore, and it's less and less aligned to what the real world looks like. So, even if you are really good at traditional instruction, I would argue, and test scores might agree with me, that you're not as successful anymore. So, you have to change.

Is buy-in essential across the board to ensure success with PBL?

You've got to commit to it over time, and you've got to have buy-in. So, I've been to lots of schools where there's one teacher who is a PBL aficionado, and they're all in and can't convince anybody else around them. I was hired at this school because the school wants to do project-based learning and there was resistance among the teachers. And I would say that's not a rarity. That's pretty dang normal.

Does PBL require teacher PD and pacing?

You can find somebody who's going to disagree with me and says, "Oh, yeah, just give me a book," and they're fine. But I have worked in 15 countries with hundreds of thousands of teachers. And I cannot give you a whole lot of examples of people who just could wing it and get it right.

Explain why scaffolding is needed in STEM PBL.

Some kids need more scaffolds than others; they're neither good nor bad. It's just a fact of life. We are in the phase of PBL adoption in which we need scaffolding. . . . The focus had been more on experiential learning, and there were assumptions about what kids knew and could do. And I think those were fallacious assumptions. And it could be for demographic reasons, it could be for linguistic reasons, it

could be for any number of reasons. But those assumptions were false. I think even middle-class kids aren't born with the ability to be effective communicators and critical thinkers. I think those are learned skills. Everybody in the field understands the importance of scaffolding both skills

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and knowledge as a precursor to PBL. So, once you make that breakthrough, I think you could be better at it. What I think is one of the failures over the first 25-30 years of the PBL movement is we – and I include myself among the people who caused this problem – we did not pay enough attention to scaffolding the work. By that I mean deconstructing a task and building up the basic skills and knowledge needed to be successful at project-based learning. I think we kind of ignored that.

What do business and industry think of PBL?

If you look at how Google hires, Google says, "We don't even want college graduates anymore, we want skill-based hires." So, industry has been telling us that these are the people who will be successful in the modern workplace, and schools aren't producing them. To me, PBL does a better job producing the skills that industry wants. The business sector is in love with this, and I'll give you an example. New Technology High School – there's 400 of them now – was started in Napa because the industry park on the south side of town said we have great schools here, but they're not producing kids with the skills needed to be successful in our industrial sector. And they said, "Create a school where kids are going to learn to collaborate, communicate, be critical thinkers and creative, and work on real work stuff." And that's how New Tech was born. Industry demanded that school. And, if you look at what IBM is doing with the P-TECH schools, it's exactly that.

How do teachers prepare to deliver PBL?

You're producing kids who need to be successful in college, career, and community; you as an expert in whatever you're teaching need to make the value judgments about what is

essential knowledge. And if you don't do that, good luck with teaching. The other thing is people say it takes a lot of time to plan a project. Yeah, it does. But the project planning is all in advance of the teaching. If you're doing Buck Institute or New Tech-style project-based learning, it's a full PBL school. Yeah, that's all you do all year long. Do most schools do that? No. They might do two or three a year, and then you've got to do traditional instruction and a couple projects, and that's the way probably 90 percent of the schools in the country do it.

What is the average amount of time it takes to do a complete PBL activity?

It depends on whose model it is. We used to argue about this at the Buck Institute. I think they settled on two weeks would be the shortest duration. I think three weeks should be the shortest duration for a project. But there's no consensus on that one.

How much time must be spent on PBL for it to be effective?

To me, time is an issue in project-based learning; it's the first question anybody ever asks. So, I answer time from the teacher perspective. For instance, there's 79 11th-grade US history standards in California. Are you really going to get through 79 standards in the 180-day teaching calendar and expect every kid to learn everything? That's ridiculous, why would you? So, you identify power standards. And any state that doesn't identify key power, central standards, whatever they call them, they're not doing a very good job as far as I'm concerned. So, you focus on power standards. Do you do 79 projects that year? No, that's ridiculous. No, you do 10 or 11 projects key to big projects.

How can success of PBL be measured?

If you are saying the only metric of success is student performance on standardized assessments, then PBL, it does no harm and tends to produce gains, slight gains across the board. But if you look at indicators that are long term – some outfits like High Tech High in San Diego and the Expeditionary Learning people and the Envision Learning Partners track kids longitudinally and see that they have far more success at college and career. And that's a more important metric.

How many schools have joined the PBL movement?

The implementation of high-quality PBL as far as anyone could count, that I know of, is less than 10 percent of schools in the country. I've seen estimates ranging from four

to eight percent. It's just not widespread. Are there pockets of it? Heck yeah. Because you look at the network, like the New Tech network of 400 schools; Expeditionary Learning, 500 schools; Big Picture; IB does elements of project-based learning. And it sounds like a lot. You might have two, three, four, five thousand schools. But in a country as big as the United States, it's a drop in the bucket.

How long does it take to get PBL right?

If you're not going to commit to this for three to five years, do not do it. You will not be good at the pedagogy unless you spend three years doing it. And you really won't be an expert until you spend five years doing it. . . . And if you don't want to spend three to five years, you don't do it because you won't be successful at it.

Why do we need standards for PBL?

Buck Institute came to the decision that they were going to put a flag in the ground and say these are the essential elements of high-quality PBL; there is doing projects, but that's not the same as high-quality PBL. And it was really a way to ensure fidelity to model and to ensure a quality standard so that the entire field didn't go down in flames.

What is high-quality PBL?

High-quality PBL is an extended inquiry in which students work collaboratively to solve a realistic problem that requires real-world skills and knowledge and to present a result to an authentic audience.

How does whole-child education factor into PBL?

I actually think the whole-child approach is one of the best things that could happen to PBL because project-based learning is sort of a holistic approach to the skills that are necessary to be successful in life. So, a whole-child approach is going to make kids better at communicating and collaborating and things like that. I think the whole-child approach is actually tremendously beneficial. . . . There is this focus on the whole child's education. For instance, my school has a large cluster of special-needs kids, but even the general ed kids have access to the psychologists and mental health counselors here. They have a wellness room with a wellness coach. So, schools, to me, are spending far more time focusing on sort of the emotional component of life and learning, whereas I didn't see that in the past.