Hello,

A school nearby is offering a POGIL workshop later this summer for chemistry, biology, or anatomy/physiology, and has offered for teachers from our school to attend. How similar is that to Modeling? Does anyone know of any research that shows how modeling performs compared to POGIL? I'm the only teacher at my school that uses modeling (I'm also the only physics teacher at my school). I've tried to talk to other teachers about using modeling, but they so far, have been resistant. I'm curious if I might be able to somehow use this offering as a way to encourage the other subjects at my school to adopt modeling.

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I'm pretty sure POGIL doesn't have physics materials. The chemistry teacher at my school loves their materials, but I haven't found any for physics.

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I attended a half day workshop on chemistry pogil. It was decent. Didn't feel like modeling. Of course, I've only done physics modeling. I've never attended a chem modeling workshop.

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Pogil uses a guided inquiry approach and is a strong program. I haven't seen materials in a while, but one of the advantages of it was that it could be done in a non-lab setting. I still feel that modeling, with faithful implementation, is the approach to science teaching most closely aligned with the practice of science.

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I attended a full day and a 3 day POGIL workshops. I do feel that it has something to offer Modelers, but it is certainly not a replacement to modeling. For me, the value comes from the structured way they set up groups for discussion. I was having trouble getting my students to actively participate in small groups (and then large group) discussions, which are vital to modeling. POGIL assigns roles (for accountability) and provides tasks for them. The teacher oversees the groups’ progress and won’t let them proceed until they’ve successfully completed each task, which consists of a series of questions tasks at increasing cognitive demand. They use the term “model” differently that modelers do and they don’t seem to have the students create it, they just give it to them, so that’s one place modelers will want to do it differently. They also, as mentioned earlier, do not have much of anything for physics.
I think that often, especially early in the school year, students need more structure in their discussions, especially if they have not had to participate and manage these discussions in other classes. **Using POGIL techniques, my students did increase their participation in discussion and became more comfortable with it. This led to better less-structured dialogue later.** I do not use POGIL with every unit not to replace whiteboarding, but it is another avenue of discourse and in IMHO is a valuable tool to use when appropriate and needed.

Date: Thu, 17 May 2018
From: Bradley Wysocki

I also teach both Chemistry and Physics at my school, and use the Modeling approach almost exclusively. HOWEVER, I have found POGIL to be a very nice complement to help aid in deployment and further development on models.

For example, the POGIL material on Ionic and Molecular compound nomenclature is really good. It's presents students with some information (they even use the term Model!) and there are a series of questions that guide them to the understanding of the model. For me it doesn't replace the Modeling approach, but it complements and enhances it. More tools in the toolbox are always good. I would certainly encourage attending the workshop you are being offered.

I also could see how using a POGIL-style approach could be a bridge for more reluctant teachers to get students thinking and problem solving themselves, as opposed to being told information.