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# ORIGINS OF POGIL

## Process Oriented Guided Inquiry Learning

*Richard S. Moog*

> *I feel we are cheating students if we do not provide the teaching that will be most beneficial for students.*
>
> *—A POGIL practitioner of eight years*

Over the past 35 years, student-centered pedagogies have become more and more prevalent at both the secondary and postsecondary levels. This chapter describes the origin and history of POGIL and the context in which POGIL pedagogy arose.

### The Journey Begins

When I started my college teaching career in 1986, my classroom looked very traditional. There may have been only about 25 students in my general chemistry class, but the structure was essentially the one that I had experienced as a student in science and math classes throughout my own education—and that had been the predominant educational structure for the previous 800 years. I carefully prepared a set of notes on which to base my physical chemistry lecture, and I delivered a well-designed presentation with clarity and care to junior chemistry majors. Because the classes were relatively small, some interaction occurred; students occasionally asked for clarification or responded to questions that I posed. Over the first few years, as I gained experience, the amount of student-instructor interaction increased, but otherwise the overall structure of the learning environment stayed pretty much the same. I received high marks on student evaluations of my teaching, but something began to bother me more and more. Why were so many of my students experiencing difficulty being successful (or more successful) in this

class? These students were bright (Franklin & Marshall College was—and remains—a very selective school at which the majority of students graduate near the top of their high school classes) and my lectures were well organized and clearly presented. I was a very good instructor, related well to my students, and was as supportive as I could be. I had high standards, but they were not unreasonable. And yet, every semester, more than 20% of my students were not successful in the general chemistry course, either withdrawing or earning a grade of D or lower. More than one of my colleagues suggested that this outcome was related to a lack of effort on the part of some of the students, but my clear sense was that most of these students were working hard and trying to be successful; still, they were just not "getting it." This bothered me. I believed that all my students were capable of mastering sufficient content to pass the course and that the blame was not necessarily one that could be placed solely on the students. This sense that more of my students ought to be more successful in my class, along with the notion that there were things that I could do to help the situation if only I could discover what those things were, started me on the path to a complete reversal of roles in my classroom.

Within a few years, I went from an instructor-centered approach based on historical precedent and practice to a student-centered approach based on research on learning and designed my courses to not only help students master the relevant content but also improve the process skills that characterize lifelong learners and effective contributors to their careers and communities. This transformation—and the development and dissemination of the POGIL pedagogical approach—did not take place in a vacuum or without the guidance, intellectual contributions, and support of countless other people. The upcoming chapters in this book provide a wealth of information about POGIL and its implementation and impact. The remainder of this chapter provides brief descriptions of the development of POGIL within the relevant historical context for that development and of the creation and evolution of The POGIL Project as a professional organization dedicated to the implementation and study of learner-centered pedagogy.

## Context for the Development of POGIL

Chapter 1 presents an excellent summary of the historical development of ideas related to student-centered pedagogy, inquiry approaches, and collaborative and cooperative learning. This chapter will focus on the specific context for the development of the pedagogic approach that came to be known as POGIL.

During the 1980s and 1990s, numerous student-centered instructional reforms were developed and implemented across science, technology,