

Pressure to Practice: The Pedagogy of Chemistry that Promotes Excellence

As I sat in the front row of my chemistry 151 class, I realized the classroom dynamic varied drastically from my days spent in William Mangrum's composition 250 class. Bill Collins focuses his pedagogy on a class dictated by the teacher, with guided student interactions. Rather than students being involved in scholarly conversation – which is optimal for writing – Collins uses the method of examples and formulas to guide the learning process.

Chemistry relies heavily on algebra; therefore merely talking about the process and formulas is not enough to fully grasp the concepts. Throughout the fifty minute class, Collins presented a series of problems which he had a student attempt to guide him through vocally. Out of the ten practice problems, only two students were able to perfectly set up and solve the equation with little help from Collins. This does not insinuate that Collins is a poor teacher, rather the opposite. By challenging the scholars to work out commonly missed problems, with a teacher present to correct and explain errors, the process becomes solidified.

Collins asks periodically, "Does anyone have any confusion about what I just explained?" Although a student rarely admits to not fully understanding the topic, Collins still welcomes questions. Many times the new information must be shown in a variety of forms to be grasped by the whole class. Collins uses definitions, formulas, practice problems, and/or visuals to allow students to learn both the conceptual and mathematical aspects of chemistry.

With all of this correlation between various aspects, Collins insures the students feel comfortable with the material. The pedagogy of a teacher-governed class is beneficial when acquiring knowledge about the sciences. Student interaction promotes learning and understanding, which is why guided problems are frequent. A series of online problems increases the versatility of the classroom environment. Scholars are expected to continue practicing the concepts and formulas with confidence and detailed examples as reference.

(Word Count: 312)