

each other—often follows a clinical supervision cycle.

After the lesson, the teacher and observer meet again. During this third phase of the clinical supervision cycle, the observer shares the data he or she collected. Through dialogue with the observer and reflection on the information provided by the observer, the teacher figures out how to modify his or her teaching. Thus, clinical supervision is meant to be a process that encourages teacher change, but does so in a way that's more reflective and internally motivated than traditional supervision.

professional development refers to the opportunities offered to educators to “develop new knowledge, skills, approaches, and dispositions to improve their effectiveness in their classrooms and organizations” (Loucks-Horsley et al. 1998, p. xiv). Indeed, any activity that helps teachers develop within their profession is professional development. For example, teachers working together to examine student results and determine better ways to support student achievement is professional development. So are strategies such as teacher study groups, lesson study, case discussion, and self-reflection and inquiry.

“Professional development” also refers to the many specially designed workshops and institutes for educators. Furthermore, if you're reading this, there's

a good chance you're a member of the National Science Teachers Association (NSTA) (which published the book), so you probably know that another common professional development avenue comes from membership in professional organizations, reading their journals and books, and attending their conferences.

Teachers can also take college courses or earn graduate degrees as professional development. Online professional development courses are increasingly popular. For example, the NSTA Institute offers online courses tailored to science teachers. The institute (www.nsta.org/institute) partners with the National Teachers Enhancement Network (NTEN), the Jason Academy, and the University of Maryland's College of Life Sciences to offer a variety of K–12 science content courses.

modeling is a fancy word for a simple idea—demonstrating. To model something is to show another person a behavior, skill, or attitude. A key point about this otherwise simple idea, though, is that the teacher modeling may be conscious or unconscious.

A teacher is consciously modeling when leading a district or in-school workshop where participants act as students to experience, say, what cooperative learning is about. When this same teacher goes back to her classroom and speaks gently to her class, trying never to embarrass students by publicly scolding them, she is still modeling, though it