

Learn What They Know *First*

Jennifer Sklarew, Environmental Science and Policy

I have structured my courses to promote oral and written communication of students' views and applications of course concepts, enabling all of us to share our diverse backgrounds and perspectives in different modes. This communication begins before the courses do, arising from my perception that communication works better when the all of the communicators in a group understand one another. In teaching, this perception manifests as a preference to learn what students know before they learn what I know.

A few weeks before the first day of class, I send a message to all enrolled students asking them to send me their specific interest in the course and any background they have on the course topics mentioned in the course description. I tell the students that **I will incorporate their interests into the syllabus if I receive their responses before the first day of class**. Based on these responses, I have added new topics and technologies to the lectures and readings, including adding tidal power to our discussion of renewable energy, adding climate finance to our economics discussions, and expanding our discussion of transportation issues to include more details on electric vehicle challenges and fuel economy standards. I also have invited some guest speakers I would not otherwise have considered. For example, speakers from the Overseas Private Investment Corporation (OPIC) and a renewable energy design firm were scheduled based on such student requests.

This philosophy also has led me to use guided inquiry and peer-to-peer learning, preceding my lectures with class discussions of the weekly readings. In the syllabi, I include weekly reading questions for the students to consider while reading the assigned material. The slides for each session list that week's reading questions, and I ask the students these questions and sub-questions to elicit their answers. With this foundation, I can fill in any gaps or misunderstandings during my lectures immediately afterwards, or skip lecture slides that don't seem needed.

To help the students to understand the connections between each class and the course learning objectives, I also provide weekly learning objectives at the start of each class session. I define or refine these objectives shortly before the delivery of each session, so I can tailor them to the students' reactions to the previous sessions. I use the weekly learning objectives to link our weekly readings, discussions and lectures with the course's overall framework and course learning objectives, leading to our ultimate classroom community goal of energy learning.



These materials are presented under a Creative Commons **Attribution-NonCommercial-ShareAlike** license: you may use, adapt, and build on these ideas, for non-commercial purposes, as long as you credit the author.