The preparation of workshop leaders is integral to the success of the peer-led teaching and learning Workshop Model, where leaders must understand the basic principles of the PLTL Workshop Model, as well as understand the role of a facilitator. For the past two years we, two professors of chemistry at Portland State University (PSU), have run a training workshop that endeavors to give the new leaders experience in their new role and provide them with the opportunity to address the challenges associated with leading a diverse group. The major goals for the training period include wanting leaders to:

1. understand the PLTL Workshop Model. We emphasize to the leaders that they are not to function as tutors and that our goal in including workshops as part of our teaching/learning program is to help students become independent learners and to take more responsibility for their learning;

2. understand the diversity of their group and ways to be inclusive of all students;

3. feel confident in their role and know what resources are available to them and how to access those resources.

The training session takes place over two days, and incorporates a range of activities. Many of these are covered in the *PLTL Handbook for Team Leaders* (Roth, Goldstein, Marcus, 2001, Prentice Hall). We minimize the lecture mode of presenting material, balancing the providing of information with the experience of actual workshops and trainee-generated presentations or idea sessions. We begin by getting the students to talk. Portland State University is a commuter campus and as such, many of the students do not know each other and may not be familiar with the faculty. A favorite starter for the session is the “icebreaker” that involves interviewing a partner and then introducing that person to the group. To help get this going we provide guiding questions and include an unimportant and perhaps silly question, such as “How do you eat a Reeses™?” to set a casual tone to the morning. This activity gets the participants talking to the group without the pressure to contribute something significant to the discussion or worry about providing a correct answer. Faculty and experienced leaders are included in these interview pairs to support the idea that we are all peers in this working group.

We feel it is important to include a session with a sample workshop and we choose to do this with experienced leaders or faculty facilitating the workshop. This is a good introduction to the PLTL approach and allows the opportunity for the session leader to stop the process and point out techniques used, and particular actions demonstrated by the leader. The portions of our training that
are perhaps unique are the use of learning styles inventories and the assignment by the new leaders to prepare a workshop and teach it.

Early on in the workshop we have students complete the Gregorc Style Delineator instrument (1979). This particular tool develops a style profile where the person has degrees of four dimensions, which are combined, resulting in styles characterized as concrete sequential, abstract sequential, abstract random and concrete random. It is expected that all persons will score in all four quadrants but that one or two will be dominant. We choose not to focus heavily on the interpretation of these styles, but do record on an overhead a plot showing where each person in the room falls on the scale. This allows a brief discussion that typically we represent many learning styles or preferences, but all have been successful in studying science. This idea provides a very nice introduction to the next session discussing group problem-solving techniques, more icebreaker activities, and some of the challenges of being a workshop leader. We also found the “Imagine” scenarios prepared by Vicki Roth from the University of Rochester and the list of frequently asked questions (FAQ) from the Workshop Project to be very useful. These scenarios can provoke a thoughtful discussion about how unique individual responses may be to identical situations, and the FAQ list can be used to stimulate a brainstorming session on how to deal with difficult situations. We urge leaders to continue discussion until they reach a consensus about a problem or issue. Again, we feel this is in keeping with the Workshop Model and helps build leader confidence in their own abilities to problem-solve. This portion of the training is particularly well received when facilitated by experienced peer leaders.

The use of learning styles inventories is common in workshops of many kinds, but actual applications of them are less frequent. We chose to group students by their dominant learning style and then assign them the task of preparing a lesson outline. All the participants had completed the general chemistry course, so we asked them to develop a lesson to teach the concept of limiting reactants. When presenting their lessons the preferred strategies of the dominant learning styles were readily apparent. The most striking difference was the starting point the different groups chose. One group preferred to begin with the chemical equation and its symbolic representation, while another group chose to start with the macroscopic food analogy. As the discussion became somewhat heated we could readily point to the need to recognize that, particularly for difficult chemical concepts, multiple approaches need to be presented and appreciated. The group format of the workshops makes this simple! The members of the group can bring multiple approaches to the table and more students may make the connections they need to make. This exercise provides an opportunity for the new leaders to be very active in the problem-solving discussion about diversity among the groups.

Another problem for workshop leaders (and teachers of all kinds and levels) is how to facilitate group learning without lecturing, tutoring or jumping in and providing answers. In the training workshop it is difficult to set up a situation where only the “leader” is the expert since all the students have similar chemistry backgrounds. This past year we chose to have each new workshop leader prepare a workshop lesson on a topic that they were an “expert” in and felt comfortable. The assignment was given at the end of the first day, to be presented the following day. To alleviate anxiety, we let students know we had backup workshops they could lead if they did not come up with a lesson plan.

This was a truly fun exercise! The groups the next day were formed to include the expert, a faculty member or former leader, and several workshop participants. The groups were asked to assign one
person to the role of observer (they could also participate), whose job it was to help evaluate how well the leader facilitated and guided the group. We learned about ballet, haiku, electrical circuits, magic bread and DNA, to name only a few of the topics that were introduced in workshop format.

The impact of these workshop exercises was readily apparent from the assessment forms we received at the end of the training days. Our form consisted simply of four prompts:

1. The training workshop helped me feel more confident about...
2. The most valuable aspect of the two days of training was...
3. I wish we had...
4. I still need to know/have questions about...

Participant responses were very positive. The workshop helped me feel more confident about “my role as peer mentor,” “dealing with various situations,” and “the entire workshop process.” The most valuable aspect was the “practice of leading a workshop the second day helped me the most,” “seeing the different approaches to problem-solving by different learning styles groups,” and “tips for different ways of leading workshops.”

We feel that this set of experiences has helped develop a group of very strong peer leaders. They enjoy their work with their workshop groups, develop close ties with these students and approach their responsibilities with sincere effort and good will. As the faculty supervising these workshops, we have found working with the leaders to be a truly exciting and rewarding experience and an unexpected benefit to the PLTL Model.

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Reference
