

ITeach 2008 Handouts for Utilizing Undergraduate Mentors

Philosophy of Peer-Led-Team-Learning (PLTL) Study Groups

The Peer-Led-Team-Learning (PLTL) model consists of study groups of six to eight students facilitated by a student (peer) leader. This model engages undergraduates in methods of group study, provides facilitated help to students in their courses, improves students' problem-solving skills, enhances students' communication abilities, and provides an active-learning experience for students. The PLTL program at Washington University is based on the Workshop Chemistry Project (now called the PLTL Workshop Project) started in New York, which was initially supported by the National Science Foundation.

The PLTL study groups meet once a week during the semester for a two-hour workshop. Each study group works together on prepared problems that are designed to be solved cooperatively, with the PLTL leader facilitating the group. The groups learn different methods of group work such as round robin, scribe, and pairs. The students also learn different problem-solving strategies and study strategies. The PLTL leader does not help solve the problems with the students in the study group, but guides and encourages them as the group solves the problems.

The philosophy of the PLTL model is that students learn how to problem solve and critically think when they study in a group. As the group solves the problems together, the students discuss the method or methods used and the reasons the specific steps were used in the solution. By working together, the students become more confident in their own abilities to succeed in solving more complex problems. No answer is given to the students; the students are to learn to decide as a group whether the answer is correct or not. This allows the students to gain more confidence in deciding when a problem is solved correctly, which is essential for performing well on quizzes and exams, as well as in any career the student might choose to pursue. In addition, determining whether an answer is correct forces the student to consider the problem more deeply. This level of comprehension allows the student to apply that knowledge and understanding to other problems and concepts. The PLTL model enables students to become a community of scholars, to take responsibility for their own learning, and to emerge as independent learners.

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National PLTL website, URL: <http://www.pltl.org>

Peer Leader training at Washington University
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At Washington University, all of our peer leaders take a one-credit general-studies course called Seminar in Academic Mentoring (SAM) during the first semester in which they are peer leaders. The SAM course meets one hour per week in a multi-disciplinary group in which teaching methods and group techniques are presented. Currently, the instructor of this course is an instructor of the general chemistry course, which uses PLTL study groups, as well as the director of the university's teaching center. This course was developed and given for the first time last fall (fall 2003) and the participants were the chemistry peer leaders. This year, the participants in the course include chemistry, mathematics, and physics peer leaders. There are two major goals of the course. One goal is to provide an opportunity for the new peer leaders to discuss openly with each other current concerns they have in the facilitating of their groups. The second goal is to discuss different teaching and group-dynamics topics and to learn to apply these topics to the leaders' individual PLTL groups.

The course covers the following topics: how to prepare for a PLTL workshop (and for the first one), the philosophy of the PLTL model and how to discuss this philosophy with your group, how to handle different situations, group dynamics and group management, encouraging participation, questioning strategies, different learning styles, diversity issues, listening skills, active learning, and self-evaluation of peer-leader role. The peer leaders write weekly two-page reflection papers, a two-page self-evaluation paper, and a group project. The group project is the creation of a book containing a collection of essays written by the peer leaders on a specific topic. In the last third of the semester, the peer leaders collectively choose a topic on something they have learned this semester as peer leaders, which they would like to pass onto the new peer leaders. The book is then given to the next year's new peer leaders at the beginning of the semester. Last year's SAM class wrote on "the greatest challenge as a peer leader." This year's SAM students read that book this fall before their first PLTL workshop and wrote a two-page response paper. It was a successful endeavor for both sets of peer leaders. It was a culminating experience for the writers and an eye-opening experience for the readers.

Developing the course was time-consuming because it was difficult to find examples of extensive peer-leader training and in-depth materials on different teaching topics developed specifically for peer leading. It would be helpful if there were different syllabi and materials readily available online to adapt. These materials could be in a database that instructors using PLTL could access. It also would be helpful to offer a workshop for the instructors of such courses to present ideas about how to train peer leaders in the topics of teaching and group techniques.

From last year's course evaluations and written comments, our peer-leaders' training course has been successful. Last year's SAM class gave excellent evaluations to the course and said that they felt better prepared as peer leaders because of this course. Some of the leaders last year were second-year peer leaders and therefore had attended a two-day workshop as training the previous year. All of these second-year peer leaders felt that the semester-long course was still very helpful and better prepared them as leaders than the two-day leader-training workshop.

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