

# PEER-LED TEAM LEARNING IMPLEMENTATION

## PLTL IN ORGANIC CHEMISTRY AT ALMA COLLEGE

MARK CUBBERLEY, CAROL SLATER AND ANGELA ZISCHKE

The implementation of Workshop Chemistry at Alma College (Alma, Michigan) is an interesting case study given the “non-traditional” freshman/sophomore organic chemistry sequence as well as the organizational interdisciplinary nature of the PLTL “staff.” The core chemistry curriculum at Alma College consists of four consecutive courses: Introductory Chemistry: Chemical Analysis (CHM 115), Organic Chemistry I (CHM 223), Organic Chemistry II (CHM 224), and Inorganic Chemistry (CHM 230). CHM 115 serves as an introductory chemistry course facilitating the transition from high school to college chemistry—basic principles of chemistry are presented within a context of chemical analysis and supplemented by consideration of the role of chemistry in modern society. Students begin the organic chemistry sequence in the second semester of the first year, continue the sequence in the first semester of their second year, and complete the core curriculum with the intermediate inorganic chemistry course.

The impetus for the implementation of PLTL Workshops in the organic chemistry sequence was a Multi-Initiative Dissemination (MID) Project Workshop Cubberley attended at Central Michigan University in April 2003. The MID workshop provided a wonderful opportunity to exchange ideas with Shaun Murphree and Nancy Lowmaster, from Allegheny College (PA), recipients of a Workshop Project Associate grant. When implementation was first considered, one potential obstacle was the availability, or lack thereof, of a “learning specialist.” However, a social psychologist at Alma College with a background in small group dynamics and Vygotskian theory turned out to be enthusiastic about filling that role in Workshop leader training. We believe that experiencing the exchange of views between a chemist and psychologist provides Workshop leaders with a model of the interdisciplinary conversation that occurs in liberal education. Collaborating with a colleague from a different discipline also provides the PLTL faculty members new perspectives on teaching and learning.

One advantage of the College’s curriculum is the opportunity to offer seven weeks of leader training immediately before the first term of CHM 223. In this first year of PLTL, Workshop leaders were recruited over the first half of the Fall 2003 semester and trained over the second half. Weekly meetings throughout the year (Spring 2004, Fall 2004) provide support for student leaders and focus on Workshop logistics and content. This term (Fall 2004), training sessions for new Workshop leaders will constitute a two-credit, second seven-week course (pending faculty approval). The article by Tien, Roth, and Kampmeier (2002) has been a valuable (and timely) resource in the development of this course. The leader training course will have a timeline that permits discussions of the

cognitive and pedagogical issues of group leadership without sacrificing the sense of urgency associated with leader training that occurs immediately preceding the semester in which the students will be leading Workshops. In addition, the timing of the course provides opportunities for vocational apprenticeship between current and rising Workshop leaders—new leaders can “shadow” current leaders.

*Mark Cubberley and Carol Slater*  
*Professors, Chemistry Department*  
*Angela Zischke*  
*Peer Leader*  
*Alma College*

### Reference

Tien, L. T., Roth, V., and Kampmeier, J. A. (2002). Implementation of a peer-led team learning instructional approach in an undergraduate organic chemistry course. *Journal of Research in Science Teaching*, Vol. 39, No. 7, pp. 606–632.

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