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## Workshop Adaptability

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### Abstract

How often would a student in a course walk up to a professor and say: "Professor, I do not comprehend the material; would you mind changing your teaching style?" More than likely one would never see this scenario. Students generally are forced to adapt to their professor, not the other way around. At the University of Texas at El Paso the Peer-Led Team Learning program provides the ability to tailor a classroom to the students' needs. The peer leader directs students into self-learning using team-based activities and problem solving strategies. One advantage of this program is its ability to evolve to students' needs. The small classroom environment promotes a personal connection among peers. This personal connection allows students to feel comfortable to ask questions and even more important, to make suggestions. The format allows students to reflect on the activities for the day to make recommendations for following workshops and for improvements giving students a sense of ownership of their learning process. The relaxed learning environment focuses attention on learning the concepts at hand not the shortcomings of the professor.

### Introduction

At The University of Texas at El Paso the Peer-Led Team Learning (PLTL) (Gosser and Roth, 1998; Gosser, et al, 2001; Tien et al, 2002) Program was initiated in 2000 in an effort to enhance students' learning and engagement in education. The format consists of students attending large lecture twice a week and a two-hour workshop once a week (Becvar, 2012). Workshop involves a small group of students learning under the direction of a peer leader. A peer leader is a student that has previously shown a significant understanding of the course's content. The peer leader guides a classroom by leading students into self-learning with use of team-based (Lightner, et. al, 2007) learning activities, problem-solving (Hmelo-Silver, 2004) and simple hands-on Explorations (Becvar, et al, 2003; Becvar, 2004; Hernandez, et al., 2006; Khateeb, et al., 2006; Frederick, et al., 2009; Campos-Flores, et al., 2010; Ronquillo, et al., 2010; Becvar, et al 2012a; Becvar, et al, 2012b). Explorations provide a bridge between the real world and the science content at hand by providing an experiential representation of the material being covered to aid in students' understanding of the concepts.

### Results and Discussion

One advantage of this adaptive program is its ability to evolve to students needs. Students are often intimidated to approach their professors to ask questions because they are fearful of what the professor might say (Cruickshank, 1981). "Educators are gradually moving away from talk-and-

chalk lectures to project-based learning, real-world problem solving, and team collaboration” (Lightner, 2007). The typical classroom environment involves a lecturer standing in front of a class communicating a message. The key word in the last sentence is ‘communicating’. In the PLTL program at UTEP communication comes in two steps. The first step involves an individual speaking while the other listens. The second and most important step is feedback from the individual listening (Jorgenson, 1981). The large size of a classroom prevents professors from having this one-on-one communication with their students thus never establishing the second step of communication.

In contrast the small classroom environment in workshops allows for the perfect setting for ideal communication. This communication allows students to build a relationship among peers and more importantly to create a level of comfort that gives workshop students the ability to make suggestions. The function of feedback is the very core of what we mean by workshop adaptability. Unlike the typical classroom, workshop agendas are not written in stone. After each workshop students are asked to reflect on the workshops structure and activities for the day. The feedback obtained is what can dictate the format for the following workshop. If students do not understand a certain activity or concept, the peer leader will be able to identify the problem by asking questions on how it can be improved. The fact that not all students learn the same way makes workshop adaptability an essential part of the workshop students’ education. Questions can be reformatted using pictures and diagrams instead of words depending on each student’s particular learning style.

The personal connection gives peer leaders such a powerful tool that it places professors at a disadvantage when it comes to getting the message across. This is the conclusion one can reach from a survey conducted of students taking workshops at UTEP (Figures 1 - 5). Students participating in this survey had previously signed

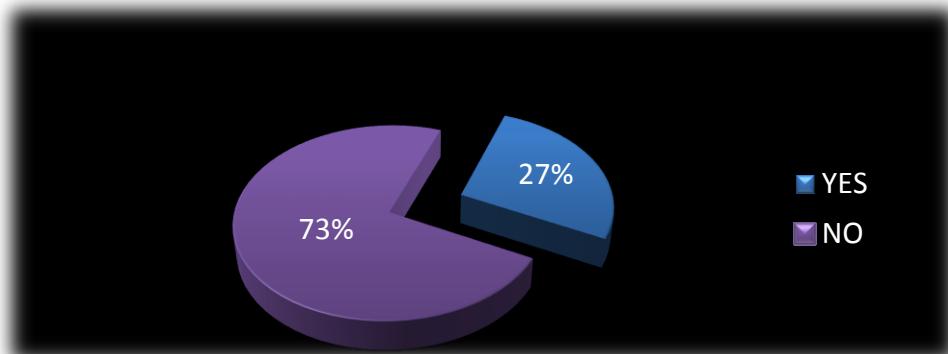


Figure 1. Would you approach your classroom professor to ask her/him to change teaching style or make recommendations on how to improve her/his teaching? (n = 52)

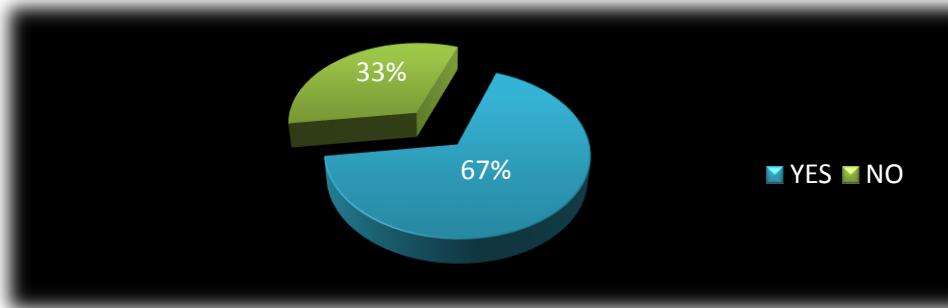


Figure 2. Would you approach your workshop Peer Leader and ask them to change their teaching style or make recommendations on how to improve their teaching? (n = 52)

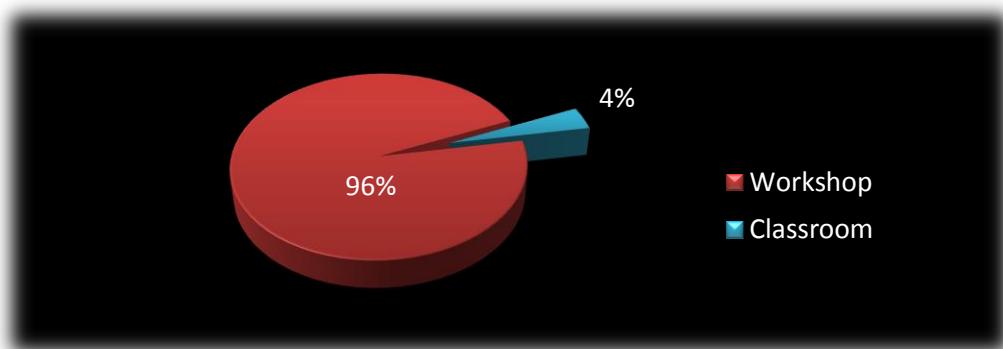


Figure 3. Where do you feel more comfortable asking questions, in workshop or the classroom? (n = 52)

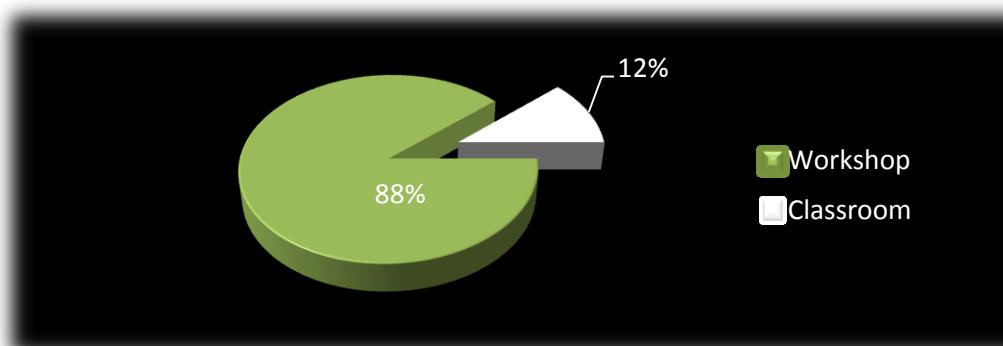


Figure 4. If given the option what would you rather attend workshop or the classroom? (n = 52)

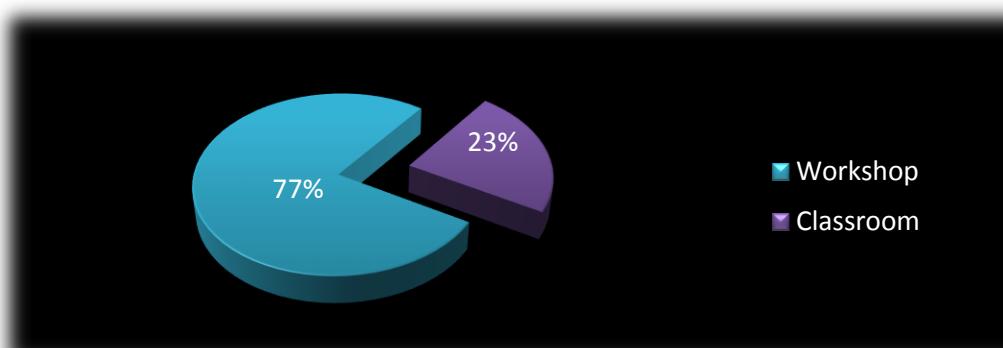


Figure 5. What do you feel has a bigger impact on your education, workshop or classroom? (n = 52)

consent forms approved by the Institutional Review Board at the institution. Students were asked to give feedback on their levels of comfort approaching the classroom professor versus their peer leader in regards to asking for a change in teaching style or making recommendations or suggestions on

how to improve teaching and learning. Students felt overwhelmingly that peer leaders would be more receptive (Figure 2 versus Figure 1). Students were almost unanimous in feeling more comfortable asking questions in workshop than lecture (Figure 3). Students clearly would rather attend workshop than lecture (Figure 4). The last question of the survey asked students to compare the relative impact of classroom versus workshop towards their education (Figure 5). Which do you feel has a bigger impact on your education? Seventy seven percent of students answered that workshop has a bigger impact on their education than lecture.

As time passes, things change; those organisms that are not able to adapt are left behind. This is true for our educational system: if we don't learn how to adapt, students and the current higher educational system will be left behind. PLTL Workshop has the flexibility of adapting to its students and for tailoring classrooms to the newer generation's forms of learning.

## References

- Becvar, J. E., Valdez, M., Almeida, V., (2003). Peer Led Team Learning: Explorations, 225<sup>th</sup> American Chemical Society National Meeting, New Orleans, LA, March 23-27.
- Becvar, J. E. (2004). Explorations: Hands-On, Activity-Based Collaborative learning in General Chemistry, 3<sup>rd</sup> International Conference of the Sun, University of Texas at El Paso, El Paso, TX, March, 2004.
- Becvar, J.E. (2012). Two plus two equals more: Modifying the Chemistry curriculum at UTEP. Peer-Led Team Learning: Implementation. Online at <http://www.pltlis.org>. Originally published in Progressions: The Peer-Led Team Learning Project Newsletter, Volume 5, Number 4, Summer 2004.
- Becvar, J. E., Noveron, J. C., Saupe, G., and Narayan, M. (2012a). *Chemistry by Exploration: First Semester General Chemistry Workbook for Peer-Led Team Learning*, El Paso, Texas, Lead For America.
- Becvar, J. E., Narayan, M., Noveron, J. C., and Saupe, G. (2012b). *Chemistry by Exploration: Second Semester General Chemistry Workbook for Peer-Led Team Learning*, El Paso, Texas, Lead For America.
- Campos-Flores, I., Ruck, L., De Leon, R., Escalera, G., Morales, R., Kalantarian, N., Tse, A., Narayan, M., and Becvar, J. E., (2010). New Explorations and Approaches for Peer-Led Team Learning in Second Semester General Chemistry, 239th American Chemical Society National Meeting, San Francisco, CA, March 21 - 25, 2010.
- Cruickshank, D., & Applegate, J. (1981). Reflective teaching as a strategy for teacher growth. *Educational Leadership*, 38, 550-562.
- Frederick, J., and Becvar, J. E., (2009). Sixteen New Explorations Developed for General Chemistry Second Semester, 238th American Chemical Society National Meeting, Washington, DC, August 16 - 20.
- Gosser, D.K., & Roth, V. (1998). The Workshop Project: Peer-Led Team Learning. *J. Chem. Educ.*, 75, 2, 185.
- Gosser, D., Cracolice, M., Kampmeier, J., Roth, V., Strozak, V., Varma-Nelson, P. (2001). *Peer-Led Team Learning: A Guidebook*. Upper Saddle River, NJ: Prentice Hall.
- Hernandez, J., Galan M., Calderon, M., Dickson, W. E., Alarcón, H., Dominquez, D., Kim, Y. J., Ordoñez, R., Khateeb, O., Padilla, A., Williams, L., Carballo, G., Azam, A., Montes, A., and Becvar, J. E., (2006). Explorations: Teaching Students to Develop the Important Questions: 'By Jove, the Whys (wise) have it!'. Peer-Led Team Learning National Conference, University of Houston-Downtown, April 20 – 23, 2006.

- Hmelo-Silver, C. (2004). Problem-Based Learning: What and How Do Students Learn? *Educational Psychology Review*, 16,3, 235-266.
- Jorgenson, D. O., and Papciak, A. S. (1981). The effects of communication, resource feedback, and identifiability on behavior in a simulated commons. *Journal of Experimental Social Psychology*, 17, 4, 373-385.
- Khateeb, O., Dickson, W. E., Hernandez, J., Becvar, J. E. (2006). Explorations: The ‘Whys’ Have It’, A Decade of Peer-Led Team Learning Symposium, 232<sup>nd</sup> American Chemical Society National Meeting, San Francisco CA, September 10 – 14.
- Lightner, S., Bober, M. J., and Willi, C. (2007). Team-Based Activities to Promote Engaged Learning. *College Teaching* 55(1): 1-18.
- Ronquillo, L., Lee, W.-Y., and Becvar, J. E. (2010). Exploring Explorations, 21<sup>st</sup> Biennial Conference on Chemical Education, Denton TX, August 1 – 5, 2010.
- Tien, L. T., Roth, V., 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*, 39.7, 606-632.

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