

# 2023

## PLTLIS Eleventh Annual Conference: Abstracts for Hybrid Presentations



Hosted by the  
**University of Houston–Downtown**  
Houston, Texas

Peer-Led  
Team Learning  
International  
Society



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# PRE-CONFERENCE WORKSHOP

Wednesday, May 31, 2023

## *Pre-Conference Workshop*

### **Introduction to the Peer-Led Team Learning Model**

- **M. Cecilia Barone**, University of Rochester
- **Mohsen Beheshti**, California State University Dominguez Hills
- **Sally Faulkner**, Queen Mary University London
- **Robin Frye**, University of Rochester
- **Lesley Howell**, Queen Mary University London
- **Hector Leal**, University of Texas Rio Grande Valley
- **Peer Leaders from the University of Houston-Downtown**
- **Peer Leaders from the University of Texas at El Paso**

**Part 1:** The workshop introduces the experience of working in collaboration with colleagues to solve a problem, facilitated by a trained Peer Leader. The focus of the process of learning is highlighted as well as the critical attributes that students gain. The Peer-Led team Learning model's Six Critical Components are introduced.

**Part 2:** Three components of the PLTL model are introduced, with collaborative exercises that support participants' understanding of each so that they will be able to choose how to apply the concept to implement the program. Faculty roles and responsibilities, recruiting and training Peer Leaders, and the rewards/challenges in implementation are discussed.

**Part 3:** The importance of challenging problems to promote interaction, the issues of integrating peer-led workshops into schedules and physical and virtual spaces, and the attention to issues of assessment for the implementation of PLTL at participants' institutions will be explored through exercises and discussion.

# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Workshop – Preparation for Peer-Led Sessions*

### **The Importance of Strong Execution in the First Workshop**

- **Rene Aguilar**, The University of Texas at El Paso
- **Luis Mora**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Peer Led Team Learning (PLTL) provides peer-assisted activities for active learning in workshops for General Chemistry at UTEP. PLTL is geared towards having the students be the main vector for learning rather than the singular instructor. Setting the mood in the first workshop is essential, clearly showing how different the interactions should be: workshops are a place where aspiring students can learn from each other rather than passively listening to the peer leader. The first workshop can be designed so that the peer leader merely facilitates the students' ability to learn and to guide the others, requiring full participation to yield satisfactory results. In this workshop, a small team of peer leaders will demonstrate just that, utilizing the audience in place of the students, working independently of the peer leader's presence in a planned activity that will convey how powerful this approach is in practice.

## *Oral Presentation – Preparation for Peer-Led Sessions*

### **Experiences Testing a Novel Video-Supported Peer Leader Training Module at Two Different Institutions**

- **M. Cecilia Barone**, University of Rochester
- **Joseph Dinnocenzo**, University of Rochester
- **Robin Frye**, University of Rochester
- **Nicholas Hammond**, University of Rochester
- **Kyle Trenshaw**, University of Rochester
- **Karen Gilbert**, University of Rochester
- **Sofia A. Delgado**, The University of Texas at El Paso
- **Ariana Ramirez**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Peer-led Team Learning (PLTL) provides a collaborative learning model for students from all backgrounds. However, active student engagement in peer discussions can be limited by factors such as intimidation in small group learning or active exclusion by peers, particularly for students from underrepresented backgrounds. Peer leaders are ideally positioned to mitigate these barriers to student engagement/inclusion in PLTL sessions. To support leaders in this endeavor, we have developed a training module that uses videos and classroom discussions to illustrate how possible barriers to participation can impact group dynamics/engagement in PLTL Workshops, and to discuss inclusive facilitation strategies to mitigate these barriers. We have tested this training module at two institutions, the University of Rochester and the University of Texas at El Paso. In this presentation we will briefly introduce the resource, its adaptability to different institutional contexts, feedback from peer leaders and trainers, and future directions for the project.

# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Oral Presentation – Emotional Support and Sense of Belonging* **Program Expansion at Queen Mary University London**

- **Lesley Howell**, Queen Mary University London
- **Sally Faulkner**, Queen Mary University London
- **Redwan Shahid**, Queen Mary University London

In Queen Mary's second year of implementing Peer-Led Team Learning (PLTL), there has been a significant expansion in the program's offerings. Four courses now require compulsory workshops, and an additional course is offered on a voluntary basis. In total, approximately 1,000 students and 70 peer leaders have participated in the PLTL program to date. To evaluate the impact of PLTL, we are currently conducting a three-year longitudinal study on student sense of belonging, confidence, and self-efficacy in the Chemistry, Biology, and Business Management degree programs. This study will allow for a comprehensive understanding of how PLTL affects students over the course of their studies. Initial data shows improvements in students' sense of belonging and self-efficacy. The PLTL program has provided students with additional support and resources to enhance their learning experiences. The longitudinal study will further inform the effectiveness of the program and the potential for future expansion.

## *Workshop – Workplace Skills and Development*

### **Energizing High Impact Educational Experiences by Investigating the True Meaning of Brainstorming and Algorithm**

- **Mitsue Nakamura**, University of Houston-Downtown
- **Allison McKee**, University of Houston-Downtown
- **MJ Asuncion**, University of Houston-Downtown
- **Azfar Vahidy**, University of Houston-Downtown
- **Pamela Morales Diaz**, University of Houston-Downtown

Many studies show that the high impact educational experiences help students to learn difficult concepts especially in STEM disciplines. This workshop gives an opportunity for attendees to investigate the original and the true meaning of Brainstorming and Algorithm, identify a problem in everyday life, and write an algorithm to solve the problem by using what they learn about Brainstorming and Algorithm that they investigate. Attendees will also collaborate on how they would use this process in their PLTL.



# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Oral Presentation – Workplace Skills and Development*

### **PLTL Empowers the Student-Professor Relationship**

- **Austin Blake**, The University of Texas at El Paso
- **Paulina Trevino**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

The peer-leading experience at UTEP helps grow the student-professor relationship because of the constant interaction between the professors leading the program and the Peer Leaders (PLs). Mandatory twice-weekly meetings occur between the professors involved with the program and PLs. These faculty members not only oversee the content of Workshops but also mentor the PLs and help guide their academic standings, career pathways, and can provide a strong letter of recommendation, because the professor is familiar with the PLs' leadership skills, communication, teamwork, and productivity. Interacting with professors leads to the 'breaking of the ice' and encourages PLs to visit and start similar relationships with professors in other courses, a situation often dreaded by students. Faculty members are an ingenious asset that makes opportunities more readily available and students more comfortable attending office hours for a discussion. Becoming a peer leader grants the PL fantastic opportunities, including enhancing the student-professor relationship.

## *Oral Presentation – Preparation for Peer-Led Sessions*

### **Motivating Participation by Focus Presentations in PLTL Workshop**

- **Grecia Perea**, The University of Texas at El Paso
- **Geoffrey Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Peer Leaders from the University of Texas at El Paso (UTEP) have previously reported on Workbooks used in Peer-Led Team Learning (PLTL) Workshops. Workbooks are sectioned into Modules, one Module considered per week of the 14-week semester. The skill of "learning to explain" can be practiced by students by having them create small, focused presentations using the workbook. Two to four person teams present in order, with the goal of students being able to highlight what they understood from the Module. Extra credit points are awarded for the team that gives the best presentation. The PL comments on what could have gone better and what they explained the best. Benefits for this workshop structure are 1) building trust amongst chemistry students, 2) content proficiency and understanding, 3) creating a safe competitive environment, 4) improving communication skills, and most importantly 4) stimulating participation in workshop.

# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Oral Presentation – Workplace Skills and Development*

### **Developing Empathetic Medical Professionals Through Peer Leading**

- **Benjamin Diaz**, The University of Texas at El Paso
- **Asher Min**, The University of Texas at El Paso
- **Joshua Cayme**, The University of Texas at El Paso
- **Michel Rojo**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso
- **Geoffrey Saupe**, The University of Texas at El Paso

Second Semester General Chemistry is a difficult class that demands students to ask questions to be successful. Peer Leaders in the Peer-Led Team Learning (PLTL) program at The University of Texas at El Paso (UTEP) answer students' questions in workshop or in personal office hours. The Peer Leaders at UTEP must be empathetic facilitators who provide quality answers and genuine service to their students. Medical professionals must provide similar service to their patients through quality care and kind education. The skills learned as a Peer Leader teach future medical professionals how to treat patients in an empathetic way.

## *Oral Presentation – Sustainability of Campus Program/Evaluation/Outcomes*

### **Closing the Attainment Gap: Peer-Led Team Learning Workshops for BTEC Students in the School of Business and Management**

- **Xue Zhou**, Queen Mary University London
- **Patrick McGurk**, Queen Mary University London
- **Lesley Howell**, Queen Mary University London
- **Redwan Shahid**, Queen Mary University London

In the academic year 2022/23, Queen Mary's PLTL programs were introduced to the School of Business and Management to help close the attainment gap for students who enroll via BTEC tariffs. These workshops were held on a voluntary basis and attendance was tracked. The program recruited eight peer leaders who facilitated workshops for 96 registered students within three days. Another 46 students were on the waiting list. There were 5 scheduled workshops throughout the semester lasting for 90 minutes each. The workshops resulted in a significant improvement in BTEC student performance, with an increase of 16.7% in overall grades and a 17% increase in the number of 2:1 grades (equivalent to grade B).

# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Workshop – Preparation for Peer-Led Sessions*

### **Increasing Student Engagement of PLTL Leaders in Training-How to Talk and See the True Colors!**

- **Kimshi Hickman**, University of Texas at Arlington
- **Monica Franco**, University of Texas at Arlington

Student engagement has been increasingly difficult post-pandemic. In this session learn how to first engage your PLTL Leaders in Training. Learn about an out-of-the-box approach to learning communication skills and engaging leaders to learn about themselves and others. During this interactive session you take the TRUE colors assessment to learn about your personality and how you interact with others.

## *Oral Presentation – Workplace Skills and Development*

### **Implementation of Brainstorming to the Training of Peer Leaders**

- **Allison McKee**, University of Houston-Downtown
- **Azfar Vahidy**, University of Houston-Downtown
- **Thanh Vu**, University of Houston-Downtown

Proper brainstorming is not often practiced as intended in many academic and professional circles. Learning how to brainstorm correctly helps participants to expand their way of thinking and encourage creative problem-solving. For the peer leaders at UHD, implementing this skill early, such as in the training curriculum for new peer leaders, will enhance collaboration between students and give them another skill to effectively solve problems. As the training material is already well developed, UHD peer leaders have thought of ways to adjust the content so that future peer leaders can master the ability to brainstorm correctly so that they can use this new learned skill during the workshop and other collaborations. Additionally, the ability to brainstorm correctly can be taught at a younger age such as to high schoolers as part of the collaborative style of PLTL. It is thought that being more comfortable with the practice of learning and working in teams will only enhance the learning outcomes of high schoolers. This presentation will discuss how the current training program can be adjusted and bettered by including the correct way to brainstorm for new UHD peer leaders, high school peer leaders and professionals.



# PRESENTATIONS & WORKSHOPS

Thursday, June 1, 2023

## *Oral Presentation – Preparation for Peer-Led Sessions*

### **SHIP: Using Grants to Navigate the High Seas of STEM Education**

- **Marice Diaz**, Miami Dade College, Wolfson Campus
- **Dacia Steiner**, Miami Dade College, Wolfson Campus

STEM Legacy is a Title III Department of Education grant at Miami Dade College's Wolfson Campus. The grant offers various services designed to empower students to succeed in key STEM courses, gain research experience, and enroll in courses that offer innovative approaches to learning. STEM Legacy also aims to assist faculty in implementing high-impact practices into their curriculum via our STEM High Impact Practice (S.H.I.P) program. Peer-Led Team Learning (PLTL) is one of the many options offered via the program. Faculty are compensated via a structure called "task points". Faculty are partnered with a high achieving student from our Peer Academic Leader (PAL) program and have the academic freedom to select the structure of the PLTL sessions and grade incentives for participants (if any). We will share our experiences and lessons learned on how MDC has continued with PLTL through leveraging grants, and how we have enhanced the existing PLTL frameworks.

## *Oral Presentation – Preparation for Peer-Led Sessions*

### **Incorporating Visuals in Workshop**

- **Elizabeth Lozoya**, The University of Texas at El Paso
- **Briana Cano**, The University of Texas at El Paso
- **Andre Corral**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso
- **Geoffrey Saupe**, The University of Texas at El Paso

Research shows that 65% of people are visual learners, so appealing to the majority of learners by incorporating visuals during the workshop facilitates learning and benefits most students. The use of videos and demonstrations during the workshop provides a fun, interactive learning environment for students that elucidates important topics and helps students place the information into long-term memory. Peer Leaders guide their workshops by encouraging teamwork through assigning group problems, creating games, and enhancing learning beyond memorization. With the diversity of students attending University of Texas at El Paso (UTEP), students utilize multiple types of learning strategies to grasp the material, develop understanding, and recall information for exams. The UTEP peer leading program provides guidance, facilitates learning, and develops resources for students by expanding workshops to be open to multiple ways of teaching for the various ways of learning.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Workshop – Workplace Skills and Development*

### **Faculty Development: Implementing Change in a Department**

- **Ana Fraiman**, Northeastern Illinois University
- **AE Dreyfuss**, Peer-Led Team Learning International Society

In STEM gateway courses, faculty are often caught in extensive requirements dictated by the academic associations of the respective disciplines and the expectations of departmental culture. Challenges of isolation, lack of emphasis on instructor preparation, and lack of collegiality need to be overcome to support changes in departmental culture. Incorporating active practices in teaching are supported through discussion in weekly coached meetings and reflecting on practical changes. Participants will gain an understanding of the importance of faculty development leading to cultural changes in the department.

## *Oral Presentation – Emotional Support and Sense of Belonging*

### **Intuitive Learning: PLTL Addresses Individuality**

- **Adriana Bernier**, The University of Texas at El Paso
- **Emily Hammer**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso

The PLTL program at University of Texas at El Paso provides a safe and more flexible environment and the opportunity for personal interaction with all the students in a large class. The small environment permits Peer Leaders to have a focussed conversation about changing study tactics and seeing what works best. We can individualize our strategy and help each student find their ideal study process. No one is left out. The intuitive learners get to play it by ear and learn what works for them. Peer Leaders (PLs) accomplish this in workshop by implementing explorations, class activities, practice exams, etc. These activities allow the students to ask questions, test their knowledge and see what works for them. The flexibility of PLTL Workshop encourages PLs to take the initiative, providing learning experiences and individualized forms of study. A classroom that facilitates intuitive learning promotes long-term retention of topics.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Oral Presentation – Workplace and Skills Development* **Peer Leading as a Steppingstone into Higher Education**

- **Madeline Olivas**, The University of Texas at El Paso
- **Abigail Valles**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

When new peer leaders begin the Peer-Led Team Learning (PLTL) program, they often have their ambitions set high for specific professional career choices. As Peer Leaders (PLs) progress through the program, some PLs ponder the idea of potentially pursuing a teaching career as their first or second choice and reassess their path in higher education. Facilitating workshops, holding office hours, and helping students reach the “aha moment” pushes PLs to continue wanting to make a difference in students' educational journeys. Several PLs have altered their career plans because of their experiences in the PLTL program at UTEP and pursued a degree in education, then have gone on to shape students' minds in the educational field. Facilitating a workshop allows peer leaders to gain valuable leadership skills and confidence in public speaking, which are essential skills needed to excel in higher education.

## *Oral Presentation – Sustainability of Campus Program/Evaluation/Outcomes* **Long-term Effects of Introductory Biology PLTL on Student Performance in Upper-Division Courses**

- **Erin O'Brien**, The Ohio State University
- **Sara Faust**, The Ohio State University
- **Amy Kulesza**, The Ohio State University

Few studies have investigated the long-term effects of PLTL used in introductory biology courses. Our study aims to investigate whether enrolling in introductory biology PLTL courses increases undergraduate performance in four upper division biological science courses. We collected data from students enrolled in either the PLTL or non-PLTL versions of introductory biology courses from Spring 2016 to Spring 2018 to compare grade performances in upper division courses: Microbiology, Genetics, Biochemistry, and Evolution. Preliminary analyses indicate differences in performance based on when students enrolled in the upper division course. Specifically, PLTL students outperformed non-PLTL students in biochemistry if they enrolled in biochemistry 1-2 semesters after taking the introductory biology course. Further, PLTL students consistently performed better in genetics than the non-PLTL students. This indicates that PLTL does provide long-term benefits for students in biology programs and may suggest an optimal timing for enrolling in upper division courses.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Oral Presentation – Preparation for Peer-Led Sessions*

### **Training Week: The Importance of Being Prepared**

- **Ximena Beltran Medina**, The University of Texas at El Paso
- **Brooke Dorsey**, The University of Texas at El Paso
- **Andre Corral**, The University of Texas at El Paso
- **Andrea Granados**, The University of Texas at El Paso
- **Madeline Olivas**, The University of Texas at El Paso
- **Abigail Valles**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

All Peer Leaders, new and experienced, at the University of Texas at El Paso (UTEP) undergo a 5-day training before the beginning of every school semester to prepare for their upcoming duties. The purpose of the Leader Training Institute is to establish a community among the Peer Leaders based upon diversity and inclusion, which is elaborated upon and developed throughout the semester. Peer Leaders, new as well as experienced are formed into groups, each of which is directed by a Council Member. Training week includes many team building activities consisting of Title IX Training, safety training, mock workshop, mock office hours, mock proctoring, discussions, and a Gallery Walk. The Gallery Walk is the pinnacle which involves new Peer Leaders presenting an activity they have developed throughout the week. By the end of the training week, all Peer Leaders will have gained experience in professional development, community collaboration, and handling difficult situations.

## *Oral Presentation – Emotional Support and Sense of Belonging*

### **Looking Beyond the Numbers: The Impact of PLTL on Psychosocial Factors**

- **Nadia Monrose Mills**, University of the Virgin Islands
- **Redwan Shahid**, Queen Mary University of London

The BCSER Project: Improving Peer-led Team Learning and Peer-Leader Training to Increase Undergraduate Student Achievement in Mathematics seeks to enhance the PLTL curriculum and leader training modules to impact students and peer leaders. We will present preliminary results from data collected from spring 2022 to spring 2023 on student's and peer leader's mathematics self-efficacy, mathematics anxiety, theories of intelligence, and mathematics beliefs. We will also discuss the implications for further improvement to the PLTL Workshops and Peer Leader Training Modules.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

***Oral Presentation – Emotional Support and Sense of Belonging***  
**Building a PLTL Community Through Structured Introductory Profiles – ‘Leaders Like Me’**

- **Kyle Trenshaw**, University of Rochester
- **Nicholas Hammond**, University of Rochester

Peer leaders were asked, before the semester started, to choose at least three probing questions to answer about themselves from a provided list. Their answers, and a picture they optionally provided, were formed into an introductory profile that was posted on the content course's LMS webpage so that students in PLTL Workshops were able to gain insight into their peer leader's life, personality, and goals. We will discuss best practices we have collected over 9 semesters of this project, discuss impacts on the relationship between faculty and peer leaders, discuss impacts on the relationship between PLTL trainers and peer leaders, and give a preliminary reporting of potential student outcomes. This project, 'Leaders Like Me', is in collaboration with Bucknell University, the University of Manitoba, and the University of Toronto.

***Oral Presentation – Sustainability of Campus Program/Evaluation/Outcomes***  
**How to Go About Scaling a Peer-Lead Team Learning Program**

- **Hector Leal**, University of Texas Rio Grande Valley
- **Sabrina Herrera**, University of Texas Rio Grande Valley
- **Marilyn Rodriguez**, University of Texas Rio Grande Valley
- **Rebekah Schlatter**, University of Texas Rio Grande Valley
- **Nancy Becerril**, University of Texas Rio Grande Valley

When you know you have a program that makes a significant difference and you believe it should be scaled, how do you go about making that happen? How do you respond when executive leadership recognizes your program and wants it scaled immediately? How do you partner with others? How do you measure it? How do you justify the funding? These are all questions we will answer from our experience. This presentation will walk the audience through the process of scaling the UTRGV Peer-Led Team Learning program from 5 courses to over 14 courses in a year.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## ***Poster Presentation – Emotional Support and Sense of Belonging*** **Creating Community via PLTL Chemistry Workshops**

- **Ethan J. Yager**, The University of Texas Permian Basin
- **Kenadie M. Gordon**, The University of Texas Permian Basin
- **Milka O. Montes**, The University of Texas Permian Basin

The integration of diversity, inclusion and equity of workshops in creating a community with incoming freshmen. Applying the PLTLIS model to support learning outcomes is a firm guide of belonging within the workshops. When including workshops into new universities or different subjects this can increase both the class set grade average which can increase the morale of incoming freshmen. By incorporating a campaign to aid faculty include emotional support and sense of belonging into their classrooms is done by hosting professional development sessions/workshops, and practicing PLTL.

## ***Poster Presentation – Critical Thinking and Metacognition*** **Long-term Effects of Introductory Biology PLTL on Student Performance in Upper-Division Courses**

- **Erin O'Brien**, The Ohio State University
- **Sara Faust**, The Ohio State University
- **Amy Kulesza**, The Ohio State University

Few studies have investigated the long-term effects of PLTL used in introductory biology courses. Our study aims to investigate whether enrolling in introductory biology PLTL courses increases undergraduate performance in four upper division biological science courses. We collected data from students enrolled in either the PLTL or non-PLTL versions of introductory biology courses from Spring 2016 to Spring 2018 to compare grade performances in upper division courses: Microbiology, Genetics, Biochemistry, and Evolution. Preliminary analyses indicate differences in performance based on when students enrolled in the upper division course. Specifically, PLTL students outperformed non-PLTL students in biochemistry if they enrolled in biochemistry 1-2 semesters after taking the introductory biology course. Further, PLTL students consistently performed better in genetics than the non-PLTL students. This indicates that PLTL does provide long-term benefits for students in biology programs and may suggest an optimal timing for enrolling in upper division courses.



# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Sustainability of Campus Program*

### **Peer Leading: A Review of How the Implementation of Small Groups Has Resulted in Big Change**

- **Samuel J. Mota**, The University of Texas Permian Basin
- **Jose A. Collazo**, The University of Texas Permian Basin
- **Samuel K. Molyneaux**, The University of Texas Permian Basin
- **Milka O. Montes**, The University of Texas Permian Basin

Since at least 2011, students taking General Chemistry at the University of Texas Permian Basin (UTPB) had been performing poorly. The DFW rate of students taking General Chemistry was as high as 62%, meaning that 62% of the students taking General Chemistry either received a grade of D, failed (F), or withdrew (W). The chemistry program implemented a multifaceted PLTL program at UTPB in Spring 2019; the years since Peer leading was implemented, both average grades and pass rate in General Chemistry have notably increased. Since the implementation of PLTL at UTPB, the DFW rates of both General Chemistry one and two have decreased. In some instances, the percentage of students that either failed or withdrew from the course had fallen as much as 50% since 2011. Not only this, but retention percentages have also increased. That is to say that the number of students moving on to the proceeding courses following General Chemistry has increased.

## *Poster Presentation – Workplace Skills and Development*

### **What Makes a Workshop Successful**

- **Paola Barron**, The University of Texas at El Paso
- **Sophia Borrego**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

New semester, new workshop, same material; all of these characteristics describe a workshop; the only thing Peer Leaders (PLs) can't account for is the new students. Here at the University of Texas at El Paso (UTEP), PLs try to incorporate a welcoming environment so everyone collaborates with each other and helps each other build on their knowledge of chemistry. For students to reach academic success, PLs must craft a trusting relationship with students and provide activities for the students to engage with each other. Structuring a successful workshop benefits not only the students but also benefits the PL. Enhancing interpersonal relationships and promoting engagement makes the workshop successful and success is reflected by the students' knowledge and course grades. In this presentation, we discuss factors to promote student engagement so students can reach high academic achievement.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation– Critical Thinking and Metacognition*

### **Assessing Student Topic Understanding – Use of Pre- and Post-Workshop Quizzes**

- **Victor H. Estrada**, The University of Texas at El Paso
- **Paulina I. Trevino**, The University of Texas at El Paso
- **Christina A. Valtierra**, The University of Texas at El Paso
- **Abigail Valles**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso
- **Mahesh Narayan**, The University of Texas at El Paso
- **Elizabeth L. Day**, The University of Texas at El Paso

Quizzes are an essential component of the Peer-Led Team Learning (PLTL) workshop that assesses the comprehension of the topics seen during lectures. However, critical questions arise regarding the best use of this strategy for students to retain the learning. When should quizzes be implemented? What should be the level of difficulty? What are the expectations and goals for each? Peer Leaders at the University of Texas at El Paso have unique approaches to these questions and more. However, incorporating quizzes before covering a topic, also known as “Are You Ready?”, increases participation during workshops and encourages students to ask more questions. Additionally, regular quizzes after the material boost confidence in the mastery of the topic and facilitate students’ preparedness. The discussion aims to present recommendations on how to best build pre- and post-workshop quizzes, and the expected goals for each from the perspective of Peer Leaders and former students.

## *Poster Presentation – Preparation for Peer-Led Sessions*

### **Conceptual and Procedural Learning in PLTL Workshops**

- **William E. Willars**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Both conceptual learning and procedural learning are needed in Peer-Led Team Learning (PLTL) workshops. At the University of Texas at El Paso (UTEP), Peer Leaders (PLs) help workshop students by providing them with a set of strategies to better understand mathematical procedures and concepts using acronyms, mnemonics, and by exploring concepts with real life examples. Chemistry is a course heavily based on conceptual theories and mathematical processes with strong interplay between the two. For students to better understand chemistry, workshop is constructed to balance both kinds of learning. Implanting games or activities with questions about both learning aspects creates a balance for students to enhance learning. We report a molecule-building activity for the chemistry concept of acids and bases; students are tasked to build the molecules of a reaction and then determine the pH with the given data. This presentation will explore the building molecule activity and its benefits.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Preparation for Peer-Led Sessions*

### **Diversity, Equity, and Inclusion in PLTL Workshop Activities**

- **Jermika Roumou**, University of the Virgin Islands
- **T’Zipporah Ward**, University of the Virgin Islands
- **Nadia M. Mills**, University of the Virgin Islands
- **Meria Marcel-Lewis**, University of the Virgin Islands
- **Be’Anca Joseph**, University of the Virgin Islands

The University of the Virgin Islands (UVI) PLTL model is institutionalized within two entry-level math courses—Algebra Concepts I and II—and counts for 10% of a student’s final grade to maintain a sustainable program accessible to all. Peer leaders are constantly aware of the diversity of the UVI population, including learning disabilities, ethnicity, and sexual orientation, when preparing for a PLTL session. Facilitation techniques and culturally relevant workshops are explored along with training to identify and alleviate math and test-taking anxiety while advocating for a growth mindset. During the weekly training, lesson guides and reflections are used to assess and anticipate any areas where students may falter, allowing for continuous adjustments to the PLTL workshop to better serve the students. This poster will feature peer training and workshop activities that show Peer Leader preparation and that consider Diversity, Equity, and Inclusion.

## *Poster Presentation – Workplace Skills and Development*

### **Using Written Responses to Increase Effective Surveying of Students**

- **Rene A. Aguilar**, The University of Texas at El Paso
- **Luis E. Mora**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Peer Led Team Learning (PLTL) is unique in the fact that the authoritative figures that facilitate workshops are current students themselves. This greatly reduces the strain in communication that most students have between themselves and the professor, either in or outside of class. As a result, students may not feel as willing to voice their progress or concerns as much as they would in a more personal, close-knit setting. Peer leading by design is able to encourage more fluid dialogue between the students by provided a smaller, more familiar environment that each individual student can participate in discussion. Allowing every individual to explain the benefits of the smaller class sizes further expands on the positive magnitude PLTL workshops have in higher education; as well being an incredible vector for allotting the students an opportunity to voice their progress and perspectives from a much needed – and often overlooked – point of view.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Emotional Support and Sense of Belonging*

### **The State of the Union Therapy “Sesh”: Destressing After an Exam**

- **Benjamin A. Diaz**, The University of Texas at El Paso
- **Annalise V. Gonzales**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Exams for Second Semester General Chemistry can be taxing on students’ mental health. Peer Leaders in the Peer-Led Team Learning (PLTL) program at the University of Texas at El Paso (UTEP) must encourage stressed students who have had a subpar performance on an exam. In workshop, peer leaders can do a State of the Union Therapy Session activity to find out what went wrong on the exam and what can be done to alleviate the stresses of the students.

## *Poster Presentation – Preparation for Peer-Led Sessions*

### **Teaching Students to Take Good Notes**

- **Samantha Zepeda**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

As a General Chemistry 2 student I registered as note-taker for the needs-based Center for Accommodations and Support Services at the University of Texas at El Paso. I helped others, and without noticing, I helped myself. I took notes for others explaining the topics covered using my own words as the professor was lecturing. I noticed people copy what the professor wrote in lecture, more like an automaton, writing but not thinking, not giving the notes a personal meaning. Now, being Peer Leader for Chemistry 2, I realize the impact my diligence in taking good notes had on me. Good note-taking allowed me to capture the essence of the content, avoiding writing without thinking. My students memorize steps to find answers, rather than understanding the concepts. Just as note-taking helped me, I have been helping my students. Giving students answers is not helping, I want to help them find solutions.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Emotional Support and Sense of Belonging* **Building a Comfortable PLTL Workshop Environment**

- **Annalise V. Gonzales**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Walking into a foreign environment while being met with the expectation that you, as a student, will have to collaborate with 12 other strangers can be intimidating and can build a hostile attitude quickly. It is the Peer Leader's (PL's) responsibility to differentiate between personalities in their workshop and identify the best way to build trust and a comfortable environment for students to thrive. It is important that the PL establishes a workshop where students' learning styles are complimented and students are willing to be vulnerable with you and their peers in their learning process. PLs at the University of Texas at El Paso (UTEP) have found that in order to provide this relaxed environment, it must be through the PL acting as a bridge between each student and the professor as well as building a positive relationship with students in the workshop.

## *Poster Presentation – Emotional Support and Sense of Belonging* **Overcoming Language Barriers in Peer-Led Team Learning**

- **Georgina Bugarini**, The University of Texas at El Paso
- **Christopher J. Trejo**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

El Paso, Texas and Juarez, Mexico form one of the largest border communities in the world. Students from the University of Texas at El Paso are comprised of U.S. and Mexican citizens, with English and Spanish languages prominently spoken. This language duality can hinder students' learning and the Peer Leader's ability to facilitate learning. Being a bilingual peer leader, allowing students to ask and/or answer in Spanish has proven to strengthen peer leader-student connections and increases student comfort, confidence, and the grasping of chemistry concepts. In contrast, a peer leader who is non-bilingual faces a language barrier challenge. This can be addressed by pairing non-bilingual and bilingual students together. This provides peer-to-peer guidance, enhanced engagement, communication, and independence. Language barriers can go unnoticed. Addressing bilingual support in Peer-Led Team Learning workshops creates an inclusive and effective learning environment.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Emotional Support and Sense of Belonging* **The Poetic Significance of a Peer Leader**

- **Paola Barron**, The University of Texas at El Paso
- **Brisa C. Medina**, The University of Texas at El Paso
- **Michel Rojo**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Since the 2000s, the General Chemistry II Peer-Led Team Learning program at the University of Texas at El Paso has educated various generations of successful students. The elusiveness of chemical knowledge paired with the switch of peer leading allows for the light of cognizance within the student's mind, the light bulb analogy. This presentation provides an allegory describing the significance of peer leading. In workshop, peer leaders are meant to empower the students to take charge of their own schooling. This can be done solely by taking the time to comprehend each of the student's questions in the workshop and supporting them throughout their thought process. And as the metaphor goes, the switch is the peer leader, the electricity is the knowledge, and the student's understanding is the light bulb. When the switch is flipped on, electricity travels and reaches the light bulb, darkness disappears, and enlightenment comes.

## *Poster Presentation – Workplace Skills and Development* **The Power of Shadowing**

- **Paola Barron**, The University of Texas at El Paso
- **Sophia Borrego**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Being a shadow to a physician, teacher, job, or peer leader is a fundamental portion of gaining a closer insight into the roles and responsibilities. Here at the University of Texas at El Paso (UTEP), we give the opportunity to students to shadow during their first semester before becoming peer leaders. Shadowing can guide a future peer leader to learn how to guide a class to academic success. This allows exposure to what mechanisms can strive for a successful workshop. Besides knowing how to conduct a workshop, shadowing peer leaders is a valuable resource for the workshop since it can help improve social interactions, communicate effectively, and handle conflicts. Shadowing has been a helpful tool through shadowing medical professionals and fellow coworkers so they can excel in their jobs. In this presentation, we will discuss the other many benefits shadowing can help exceed the PLTL program.



# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation– Workplace Skills and Development*

### **The Benefits of Peer Leading Beyond Academic Success for Peer Leaders**

- **Karim Y. Garciayala**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

The National Library of Medicine released a study detailing that, due to COVID-19, depression rates in the U.S have increased significantly. They report that this increase probably resulted from lockdowns during the pandemic. Though the pandemic has slowed, its effects are still present, as people are conditioned to be less social. What does this mean for Peer-Led Team Learning (PLTL)? PLTL at the University of Texas at El Paso (UTEP) accelerates and promotes the topic of interaction in a positive way to both students and Peer Leaders (PLs). PLs facilitate learning within the general chemistry courses, interacting consistently with students that need aid in these courses. This leads Peer Leaders to work on skills that can be used outside of UTEP, such as communication, confidence, making deeply rooted relationships and an overall sense of belonging. All of these benefits can be very useful in fighting depression today.

## *Poster Presentation – Preparation for Peer-Led Sessions*

### **Mentoring Students on Effective and Efficient Study Habits**

- **Abigail Valles**, The University of Texas at El Paso
- **Anjolie R. Miranda**, The University of Texas at El Paso
- **Asher A. Min**, The University of Texas at El Paso
- **Elizabeth M. Lozoya**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso
- **James E. Becvar**, The University of Texas at El Paso

Discovering and implementing effective study habits is one of the most daunting tasks associated with succeeding in college. Peer Leaders (PLs) at the University of Texas at El Paso concentrate on building student study habits utilizing a PLTL Workbook. Workbooks provide students with summarized topics, study strategies, practice tests, practice problems, and step-by-step guides to word problems and additional complementary problems. Study tips and learning tricks such as mnemonics are positioned throughout. Students learn to effectively condense, retain, and apply concepts in activities other than lectures. In addition, Peer Leaders guide students in the cultivation of self-awareness and personal growth, which helps students acknowledge and address the gaps in their knowledge. This mentoring serves as a backbone strategy for first-semester general chemistry students to create life-long healthy habits that can be used not only in classroom settings throughout school but also in the workplace after they graduate.

# PRESENTATIONS & WORKSHOPS

Friday, June 2, 2023

## *Poster Presentation – Sustainability of Campus Program*

### **Resilience in Education and Advanced Leadership Learning (REAL Learning)**

- **James E. Becvar**, The University of Texas at El Paso
- **Geoffrey B. Saupe**, The University of Texas at El Paso

Starting a conversation: Does PLTL Trump Other Forms of Learning Facilitation? Peer Leaders in PLTL programs practice taking risks. IF ASKED, they create new scholarship of learning. The opportunity exists, so PLs learn they can try things. They learn to deal with people and in doing so, they learn to deal with human idiosyncrasies, foibles, reluctances, psychological problems. Peer leading is human to human interaction. Too many students arrive at college thinking they will become medical doctors but have little idea of the depth of commitment to learning those thoughts entail. From Rodgers and Hammerstein in South Pacific, “They must be carefully taught.” How do you train the trainers of learning? Very carefully! Very deeply! PLs at all campuses utilizing PLTL represent budding scholars needing professional guidance to create new strategies for assisting others in life-long learning. The conversation requested is about generating proposals using this theme.