2017

Thursday – Saturday | June 1st – 3rd
Northeastern Illinois University
Chicago, Illinois, USA | Sixth Annual Conference
Peer-Led Team Learning International Society

Oral Presentations & Workshops Abstracts

ORAL PRESENTATIONS

Oral Presentations & Workshops I

Room: SU 214
Thursday, June 1, 2017 – 2:45 PM
Resume Writing and Interviewing 101: Highlighting your PLTL Experience
Kimshi Hickman
University of Texas at Dallas

Your resume is one of the most important tools in securing a job interview. The first half of this interactive workshop will help you to highlight your education and leadership accomplishments and review the basics of resume writing. The second portion of the workshop will focus on interview preparation. Be prepared to practice!

Room: SU 003
Thursday, June 1, 2017 – 2:45 PM
Effectiveness of Peer Leaders Guiding Service Learning Projects in Freshman Seminar Course
Mitsue Nakamura & Mary Jo Parker
University of Houston- Downtown

Many published studies indicate that what students experience during the first year of college greatly affects their mind set to complete a college degree. Also, other studies confirm that not only Peer-Led Team Learning helps students understand and retain the concepts in STEM disciplines better, but also teach them how to collaborate and become productive and effective team players. Community engagement is integral to the education of STEM undergraduates as learning and mastering critical thinking, effective group dynamics and processes, critical skills for graduate school or the workplace. This study shows that Peer-Led Team Learning can be a great tool for a freshman seminar course by discussing effectiveness of peer leaders guiding service learning projects. The projects focus upon middle school-aged students, and provide critical mentorship among the population in Houston by identifying the underrepresented population in the STEM disciplines, and developing and implementing projects which will help increase this population.

ORAL PRESENTATIONS

Room: SU 003
Thursday, June 1, 2017 – 3:15 PM

Using Peer Leaders to Support Research Modules in Introductory STEM Courses

Joseph Hibson, Rachel Trana, Elisabet Head, Paulo Acioli, Ken Nicholson, Sudha Srinivas
Northeastern Illinois University

The Peer Enhanced Experiential Research in STEM (PEERS) project supported by a National Science Foundation Improving Undergraduate STEM Education (NSF-IUSE) grant has focused on the implementation of research modules in the introductory STEM curriculum at Northeastern Illinois University. Peer leaders for the modified foundational courses in Chemistry, Computer Science, Earth Science, Mathematics and Physics are trained through workshops and through an annual interdisciplinary seminar course. In addition to instruction in peer-mentoring best practices, peer leaders actively conduct research within the participating STEM disciplines, emphasizing scientific writing and research presentation skills. The peer leaders subsequently provide student support for their assigned courses by using the tools and abilities they developed in the interdisciplinary course. This session samples the instructional materials presented in the peer-leading interdisciplinary course. Attendees will then participate in a creative problem solving activity designed to highlight peer mentoring techniques specific to the computer science discipline. This activity will require attendees to collaborate to develop the logical steps for a particular game and then evolve those steps further to modify the original game using the methodologies presented earlier in the session.

ORAL PRESENTATIONS

Oral Presentations & Workshops II

Room: SU 214
Friday, June 2nd, 2017 – 2:45PM

UTDallas-PLTL: Leveraging Spoken Language Technology for Assessment of Communication based Learning Behavior in Peer-Led Team Learning

John H.L. Hansen, Kimshi Hickman, Ne'Shaun Jones, Harishchandra Dubey, Abhijeet Sangwan, Vinay Kothapally
University of Texas at Dallas

Spoken language technology has undergone significant advancements in the last decade, however its use for analysis of small-group pedagogical interactions is limited. Interaction among students and peer lead is a key element in Peer-Led Team Learning (PLTL) sessions. Speech communication is a fundamental mode of human-human interactions. In this study, we use wearable LENA units for longitudinal collection of PLTL interaction in naturalistic settings. The LENA Foundation was established to support single-unit LENA data capture for language assessment between children and adults – allowing for daily assessment of word count, conversational turns, and child vocalizations. We focus on employing this platform for data collection. Traditional speech systems designed for single-stream telephone conversations, broadcast news, and/or acted dialogs etc. are not suitable for accurate analysis of multistream spontaneous conversations in PLTL. CRSS-UTDallas has established two corpora from UTDallas Student Success center entitled: PLTL-Chem and PLTL-Calc2 corpora, which consist of multi-stream audio data (one stream per student) for ten teams with six to eight students. The students attending undergraduate Chemistry (PLTL-Chem) and Calculus-2 (PLTL-Calc2) at UTDallas were recruited for data collection. In total, it contains over 600 hours of audio data from +100 PLTL sessions. CRSS research on PLTL interactions include: (i) acoustic front-end diarization processing for detecting pauses in interactions and speaker segmentation to know "who spoke and when"; (ii) behavioral speech processing backend for extracting objective quantities that correlate with learning and interaction behavior among participants. The backend consists of emphasis detection ("hot-spots"), question-inflection detection (measures curiosity), speech-rate/word-count (measures engagement), dominance score estimation, participation analysis (time for which student spoked) etc. The developed speech systems were evaluated on CRSS-UTDallas PLTLChem and PLTL-Calc2 corpora. Results validate audio based assessment of behavioral characteristics in PLTL sessions. Using spoken language technology for accurate summarization of PLTL groups offer the opportunity to help education researchers in designing best practices for PLTL. The results suggest improved application of speech technology for assessment of student's behavior responsible for learning in PLTL sessions. The research has two dimensions: first to define behavioral metrics, and second to develop robust algorithms for extracting these metrics from naturalistic speech data.

ORAL PRESENTATIONS

Room: SU 214
Friday, June 2nd, 2017 – 3:15PM

Progression of a PLTL Mentor Program: A New Way to Train Leaders

Ne'Shaun Jones
University of Texas at Dallas

The PLTL Mentor Program at UT-Dallas was established for students who show great potential as future leaders, but who would benefit from further experience and training. Initially, the program included candidates working with veteran PLTL leaders in order to learn more about how to lead sessions. We have since adjusted our program so as to give the mentees a more interactive experience. Mentees now have the opportunity to work with several leaders throughout the semester as well as to participate in activities which enhance their leadership skills. At the end of the semester, the candidates present what they have learned to the PLTL Supervisor and Team Leaders. In the future, we hope to further improve the Mentor Program by incorporating more group activities for the mentees, as well as by periodically checking in with them over the course of the semester.

Room: SU 003
Friday, June 2nd, 2017 – 2:45PM

The Implementation of Programming in Peer-Led Mathematics Workshops

Janet Liou-Mark, Joel Chapman, Johann Thiel, Boyan Kostadinov, Lin Zhou, Holly Carley
New York City College of Technology

New York City College of Technology has been piloting the implementation of programming in its peer-led Precalculus and Calculus workshops with the goal of attracting and retaining more students, particularly underrepresented minorities and women, in the computing majors. Recruitment efforts and Workshop materials integrating the mathematical and programming concepts will be presented. This project is supported by The Department of Education Minority Science and Engineering Improvement Program (MSEIP) grant # P120A150063.

ORAL PRESENTATIONS

Room: SU 003
Friday, June 2nd, 2017 – 3:15PM

Using Peer-Led Team Learning as a Means to the Same End: A Tale of Student Success in Chemistry and Speech Communication

Volrick Higgs, Orlando Pando-Morejon, Kimberly S. Lanier
Miami-Dade College

In fall 2015, Miami-Dade College–InterAmerican Campus (MDC-IAC) was awarded a United States Department of Education Title V Developing Hispanic Serving Institutions grant to expand Peer-Led Team Learning (PLTL) offerings to faculty and students in all eight disciplines on campus: Business; Communication, Arts, and Philosophy (CAP); Engineering and Technology; Mathematics; Natural Science; School of Education; Social Science; and World Languages. PLTL is currently being offered to students by faculty in six of eight disciplines on campus, two of which are Natural Science and CAP. The presentation will examine the PLTL models employed at MDC-IAC and explore how two professors—one in the traditional PLTL area of Chemistry in the Natural Science Department and one in the non-traditional PLTL area of Speech Communication in the CAP Department, who explores concepts through the lens of Critical Theory—have used PLTL to supplement classroom instruction and discourse. The presentation also examines three semesters of longitudinal data that compares the course performance of those students who participated in PLTL to those who did not participate in PLTL. The data reveals that overall, students who participated in PLTL in Chemistry and Speech Communication performed better in the course than those students who did not participate in PLTL sessions.

ORAL PRESENTATIONS

Oral Presentations & Workshops III

Room: FA 107
Saturday, June 3rd, 2017- 10:15AM

The Effects of PLTL on Pass Rates, Academic Performance, and Retention of URM Students in STEM Courses

Kimshi Hickman
University of Texas at Dallas

Underrepresented minority students (URM) are lagging behind White and Asian students in graduating with STEM degrees. Peer education has been adopted throughout higher education institutions as pedagogy and a learning strategy to improve retention and graduation rates. This workshop will review the results of a longitudinal study of URM students at UT Dallas participating in PLTL for 10 courses: General Chemistry I & II, Organic Chemistry I & II, Physics I & II, Calculus I & II, Differential Calculus, and Integral calculus. This quantitative study examined course grade rates and retention rates in subsequent STEM courses for these students

Room: FA 107
Saturday, June 3rd, 2017- 10:45AM

Incorporating Video into Process Evaluation: An Approach to Improve the Implementation of Student-Led Academic Support Programs

Christopher Scagnelli
State University of New York at Cortland

Peer-Led Team Learning (PLTL), group problem-solving workshops for chemistry, is a student-led academic support program. Program coordinators train and oversee PLTL's implementation. However, communicating program expectations and facilitation guidelines to student leaders inevitably yields misinterpretations. Even the best planned programs have variations and unexpected oversights in their real world execution. Conducting a process evaluation allows coordinators to assess the degree to which their program or intervention is being implemented as intended. This paper argues for program coordinators to incorporate videotaping into their process evaluations of student-led academic programs because video provides valuable insight that goes beyond conventional observations and anecdotal reports. The empirical nature of collected footage helps coordinators pinpoint discrepancies, resulting in immediate program adjustments, revised trainings, and better articulated program policies.

Room: SU 003

ORAL PRESENTATIONS

Saturday, June 3rd, 2017 – 10:15AM

The Peer Leadership STEM Manual

Janet Liou-Mark, Carlos Alvarez, Julia Rivera, Victor Lee, Fatima Rushdha Mohamed Rafreek, Farjana Shati
New York City College of Technology

New York City College of Technology is developing a comprehensive Peer Leadership STEM manual that will detail the program components needed in order to implement a successful Peer-Led Team Learning program. The focus of the manual is two-fold. Firstly, the manual will provide a rationale for a peer leadership program, the benefit and roles of the peer leader, a sample PLTL workshop format, and a few assessment strategies which administrators, faculty, and staff can use as a resource. Secondly, the manual will serve as a training handbook for peer leaders with relevant case studies provided. Sample application forms and surveys will also be included. This project is supported by The Department of Education Minority Science and Engineering Improvement Program grant # P120A150063 and the City Tech Black Male Initiative.

Room: SU 003

Saturday, June 3rd, 2017 – 10:45AM

New Mexico State University Peer Leadership in Biology- and a case study

Avis James and Erika Anaya
New Mexico State University

Dr. Avis James will describe the peer mentor program at New Mexico State University. A demonstration of a workshop used in the program will be run by a peer mentor, Erika Anaya. The case study involves examining data in a research study on the relationship between an African bird species and large mammals. The purpose of the case study is to challenge students to change popular ideas with data based information.