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**MANDATING PLTL WORKSHOP SESSIONS: THE KEY TO SUCCESS**

YUANYUAN KANG, ELSY RIVERA, KAFAYAT BUSARI, SHEBNA CHEEMA, AND REYNA VALDEZ

Abstract: In the Spring of 2011, PLTL workshops in a General Biology 1 class was launched at the University of Houston, Downtown (UHD). The workshops were effective, but only benefited one quarter of the class that attended the workshops. With three-quarters of the class not attending, the passing rate of the whole class was around 40%. We hypothesized that the lack of success was due to the voluntary student participation and decided to mandate the workshops to the whole class in Fall of 2012. The class passing rate increased from 40% to 60%. In addition, the class showed better engagement, had a lower drop rate and performed the best in the departmental final exam. We believe that the mandatory attendance of PLTL workshop sessions helps broaden their impact which led to the success of the whole class. Therefore, our model provides valuable insights into a crucial component of successful PLTL implementation and may prove useful especially for those institutions with diverse student populations.

Peer Led Team Learning (PLTL) is a model that employs peer leaders to mediate well-structured and collaborative learning workshops. It is based on the concept that under the guidance of more experienced students who are peers to participating students, active learning can truly occur (Gosser, Cracolice, Kampmeier, Roth, Strozak, & Varma-Nelson, 2001). According to the PLTL model, successful implementation of peer-led workshops depends on six critical components: (1) Workshops are part of the course; (2) Faculty is closely involved; (3) Peer leaders are well trained; (4) Workshop materials are appropriate in level of difficulty and rewarding to student performance; (5) Workshops are held on a weekly basis; (6) Institutional support is available. However, not all components seem to be equally important as a successful model may partially or completely lack one or two components. One such example is at Florida International University where coordination of workshops is operated by the staff rather than by the faculty themselves (Hernandez, Alberte, Cruz, Calero, and Pitzer, 2012). This centralized model opens up a dialogue of which approach is the most effective and what components are truly indispensable.

One factor that received little attention is whether workshop attendance should be voluntary or mandatory. Several successful implementations have recruited a relatively large pool of peer leaders to scale up the number of workshops for increasing numbers of students, but they do not

require students to go to these workshops (Hernandez, *et al.*, 2012; Liou-Mark, 2012). These analyses compare the performance of students participating in PLTL workshops to those who are not, and find a significantly higher level of performance among the PLTL participants. However, these findings are often challenged with the alternative explanation that students who attend workshops are more motivated than non-participants and are more likely to succeed. Moreover, if we aim to transform student culture through these workshops, the goal is a lot more achievable when 100% of students benefit. Therefore, we believe that mandatory attendance is key to success as suggested by our data below.

We started to implement PLTL workshops with the General Biology 1 class in the Spring of 2011, subsequently in the Fall of 2011, Fall of 2012 and Spring of 2013. The class size was about 60 students and most of them were freshmen. Historically, the passing rate with a C or above in this course department-wide was ~40% over the past five years. The University of Houston-Downtown is a university with a diverse student body coming from very different cultural and educational backgrounds. A wide gap exists between students at the top of the class and those at the bottom. Therefore, we had two goals in mind. One was to improve the overall performance of General Biology 1 students and the other one was to decrease the gap.

In the Spring and Fall of 2011, Kang implemented two weekly PLTL workshops that accommodated 20 students from her class. All six critical components were met and she was closely involved in supervising peer leaders, designing workshop materials and monitoring workshop effectiveness. Even though participating students did better (63% passing rate in the Fall 2011) than those who did not (43% in the Fall 2011), the overall passing rate remained the staggering 41-43%, not different from the average passing rate in the department (Table 1). One interpretation was that PLTL workshops benefited those students who attended but failed to reach out to the others who needed the help the most. Therefore, the overall passing rate was not improved.

In the Fall of 2012 and Spring of 2013, we initiated a recruiting process where more qualified peer leaders were trained. Since enough sessions could be made available to students, Kang required her whole class to go to PLTL sessions. This strategy change led to two immediate improvements: the maximal integration of the workshops into the course and a broad impact on all students. First, since all students were required to go to the sessions, Kang could design the course and workshops that better complemented each other and gave students course credits based on their participation in workshops. In addition to challenging workshop materials, peer leaders also led exam reviews and addressed exam questions after each exam. Students were forced to go to these sessions and therefore were forced to stay tuned with the class. Any positive experience in workshops translated into success in the class. Secondly, all students benefited from the PLTL workshops in contrast to limited benefits in voluntary attendance. A statistical analysis from the University of West Georgia has provided compelling evidence that students with lower GPAs performed better after attending workshops than those with higher GPAs who did not attend workshops (see Garmon, 2014, these *Proceedings*). This holds true for both high performance and low performance students

groups (Garmon, 2014). Therefore, we believe that mandatory attendance can greatly enhance the overall class performance.

Our data suggested that the overall class performance dramatically improved with the mandatory attendance of PLTL workshops from 42% to 56-62% (Table 1). To show that this improvement reflects better understanding and higher level of knowledge among Kang's students, we compared their scores in the common final across multiple sections. In general, the two sessions with workshop (here called supplemental instruction) did the best in the common finals. Interestingly, the students in the PLTL workshop session performed better than a faculty-led recitation session (Table 2).

Therefore, our data strongly suggested that in order to improve the performance of the whole class, mandating PLTL workshops is the key. Even though mandatory attendance does not seem critical for implementing PLTL workshops, it is critical if the goal is to improve the performance of a large student population, considering either the whole class or across the department. We hope our data will give valuable insights to educators who plan to implement PLTL for their classes and are searching for a successful model. Our outcome is not surprising but highly encouraging to those who hold the same belief as we do.

Semester	Grade Distribution						Percentage			
	A	B	C	D	F	W	TOTAL	A/B/C	F	W
Spring 2011	6	13	15	12	19	14	79	0.43	0.24	0.18
Fall 2011	3	9	6	7	14	5	44	0.41	0.32	0.11
Fall 2012	6	10	18	9	10	4	58	0.60	0.17	0.07
Spring 2013	3	14	20	8	13	8	66	0.56	0.19	0.12

Table 1: The grade distribution of general biology I 1301 in the Fall of 2012 in comparison to the year of 2011. All courses are taught by the same instructor with **mandatory** or voluntary supplemental instruction.

General Biology 1 Sessions	Average	Percentage of A/B/C	Supplemental Instruction	Mandatory PLTL Sessions
Session I with PLTL	66.1%	43.4%	Yes	Yes
Session II with recitation	65.5%	37.5%	Yes	No
Session III without Supplemental Instruction	60%	36.67%	No	No
Session IV without Supplemental Instruction	60.8%	30.43%	No	No
Session V without Supplemental Instruction	58.8%	21.88%	No	No

Table 2: Class performance in the departmental common final in the Fall of 2012.

## References

- Garmon, L.B. (2014). Why Attendance is Mandatory in Workshops: Comparison of Course Grades of Workshop Attendees vs. Non-Attendees with Similar GPA and SAT Scores. Part II: Results for Second-Semester Students. *2013 Conference Proceedings of the Peer-Led Team Learning International Society*, May 30-June 1, 2013, University of Houston-Downtown, [www.pltlis.org](http://www.pltlis.org); ISSN 2329-2113.
- Gosser, D., Cracolice, M., Kampmeier, J., Roth, V., Strozak, V. and Varma-Nelson, P. (2001). *Peer-led Team Learning: A Guidebook*. Prentice Hall. Upper Saddle River, NJ
- Hernandez, J., Alberte, J., Cruz, A., Calero, K. and Pitzer, T. (2012). Tiered team supports self-funded peer-led team learning at Florida International University. Retrieved from <http://pltlis.org/wp-content/uploads/2012/10/Implementation-Various-Campuses-Hernandez-et-al-FIU-FL.pdf>.
- Liou-Mark, J. (2012). Institutional support for workshops at City Tech; missing: integration with courses and faculty. Retrieved from <http://pltlis.org/wp-content/uploads/2012/10/Implementation-Various-Campuses-Liou-Mark-NYC-College-of-Technology-NY.pdf>

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