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Hub-n-Spokes: A Model for Centralized Organization of PLTL at FIU

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Abstract

Peer-Led Team Learning (PLTL) at Florida International University (FIU) is an active learning component added to several courses within the Department of Biological Sciences. Since its inception in 2000, the program's model has evolved to accommodate a large volume of students and courses. FIU utilizes a centralized model in the administration of the program. This office manages every aspect of the PLTL workshops, ensuring the standardization and overall quality of workshops across all course subjects. Our model reduces faculty's time commitment and allows for a student-centered administration. This model of administration is a key factor in FIU PLTL becoming a self-sustaining, institutionalized component of undergraduate biology education.

Introduction

Peer-Led Team Learning (PLTL) at Florida International University (FIU) began in 2000 in the Department of Biological Sciences, by Thomas Pitzer. He was first exposed to PLTL in a regional conference at the University of Miami in 2000. The conference was part of the efforts of the NSF-funded PLTL National Dissemination grant in the late 1990s. This peer-instruction model, initially, was developed for chemistry students. This project established an active learning paradigm led by peer mentors instead of instructors or graduate students. The PLTL model goes against the typical asocial nature of traditional instruction and embraces social learning. Scientific research is done in teams where individuals interact through discussion and debate to offer different background experiences, skillsets, and perspectives on research questions. This same paradigm was transferred to the learning environment in the PLTL model. In this social learning environment, Peer Leaders (PLs) become invaluable collaborators in implementation of new curriculum while providing a unique perspective into the learning process. The partnership between PLs, faculty, and staff is crucial in forcing the evolution of curriculum.

The FIU program did not start with a grant, nor has it ever been reliant on a grant to operate. This program relies on departmental support and the volunteer partnership with undergraduates. Currently, the program at FIU caters to over 3000 students and about 200 PLs every semester. At its inception, the program had only six sections of PLTL, three PLs, no institutional support, no funding, and was only offered in one course, General Biology I, for 150 students. As student numbers grew, the demand for PLTL did as well. The solution was to contract the most experienced PLs to manage the program on a day-to-day basis. Adding staff fostered expansion into multiple courses including majors, non-majors, upper, and lower-level courses.

In the traditional PLTL model, the responsibility of managing all aspects of a PLTL program falls on the instructor teaching the course with the aid of a learning specialist. Different instructors may have varying degrees of interest, experience, and time to dedicate to the program. This potentially leads to variations in the

quality of the educational experience for both PLs and students. The consistency of course quality is vital to ensure a high standard of graduates with high employability. In the traditional administrative model, every instructor is required to run their own PL training sessions and manage the workshops prior to and throughout the semester. As each instructor's PLTL program grows, so do the pressures for them to maintain quality and appropriate attention to every PL (Gafney and Varma-Nelson, 2008). At FIU, the solution was to form a central office for the program. The consolidation of the program allowed for the standardization of PLTL and the reduction of the amount of repetitive work completed in the traditional administrative model. There are only a certain number of students that one person is expected to handle, especially when referring to an instructor who is not only teaching, but may also have a significant portion of their yearly assignment dedicated to research. This facilitates the administrative duties for the instructors, allowing the workshops to run more efficiently over time.

Training and Standardization

To relieve the pressure from instructors, the dissemination of workshop content to PLs fell on Group Discussion PLs (GDPLs). GDPLs are experienced PLs who have extensive science and pedagogical training. These GDPLs are responsible for meeting with a designated PLTL staff member and/or course instructor before leading Group Discussion (GD) each week. The GD is the powerful foundation for a successful workshop. At each meeting, the GDPLs review content for each week, and cover the approaches that drive a perfectly run workshop. Understanding content is not enough. PLs must be metacognitive in their approach to facilitated discussion solely through the use of questions. The faculty create and/or review the workshop modules and readiness surveys for their course. All modules align perfectly with what has just been covered in the lecture course. The questions in the modules elicit in-depth discussions from the students in the workshops.

All PLs are obligated to attend a GD each week to be authorized to run their own PLTL workshop. The GD runs longer than a regular session in order to address different approaches and to design, plan, and implement an appropriate sequence of probing questions for the workshop module. In this way, every PL has had the same exposure to their subject's content, ensuring consistency across all PLTL workshops. However, a student's experience may still vary, depending on the background and familiarity on pedagogy of the PL. Therefore, supervision is necessary to ensure the proper implementation of the PLTL model. Traditionally, the instructors will supervise their workshops, to ensure proper practice. However, as a PLTL program grows over time, there is no feasible way that one instructor can supervise hundreds of PLTL sessions. At FIU, experienced PLs have been entrusted to perform this task. These PL supervisors are trained, at the beginning of each semester, to properly audit the workshops, and can only supervise subjects they have previously led. The supervisors assess and review PLs with a series of Likert Scale and dichotomous questions to evaluate performance. The PL supervisors also complete a pros-and-cons analysis on each PL. In the occurrence of specific cases, a coordinator from the central PLTL office may address, supervise, and scaffold a PL directly to improve the PL's implementation of the PLTL workshop model. The number of potential PL supervisors grows parallel with the size of the PLTL program.

Administration and Policy

Potential PLs are recruited using e-mail messages, flyers, and in-class presentations. Interested parties must fill-out an application to participate in the program. At FIU, the survey system Qualtrics Research Software is used to tabulate PL application data. This process facilitates the recruiting process while certifying a database per term. FIU PLTL requires two applications, a primary (with demographic information) and a secondary application (including choices of course subjects, and availability for GD and workshop

periods). These applications are then reviewed to ensure proper credentials for each PL, before they are assigned a certain subject. Further review of applicants occurs at the pre-term orientation.

Prior to the start of term, FIU PLTL holds a mandatory orientation, lasting approximately 10 hours. New and experienced PLs attend an intensive training comprised of administrative procedures, pedagogy, and running mock sessions. PLs then begin attending their GDs at the start of the semester. GDs extend training of topics covered during orientation to preserve retention. The role of the GDPL is to model how each PL should run their following workshop.

Once PLs are assigned workshop sections, each PL is required to keep records of student assessments and attendance, both written and online via the FIU PLTL website. PLs have a standardized attendance sheet where all section information is listed along with student university information. Each PLTL student must sign the attendance sheet in order to confirm his/her attendance and complete a readiness survey at the start of each week's workshop. The readiness survey is a 5-question preparatory survey to engage the student in workshop module content. Students can earn up to 5 points on this survey. Textbooks and class notes earns students another 5 points. Engagement in the workshop can earn students an additional 0, 5, or 10 points per workshop. Every PL keeps these points well documented on their attendance sheets and their class pages located on the FIU PLTL website, a Moodle-based website.

The website automatically calculates the total points earned for each student. At the end of term, PLs submit all documents to the central PLTL office once all grades are submitted online. The FIU PLTL staff is responsible for checking student documents and certifying the points earned by students.

Although FIU's standardized model removes a reasonable amount of responsibility from faculty, frequent meetings with the PLTL staff, GDPLs, and PLs are necessary for the success of the program. The content presented during PLTL workshops should never precede the introduction of the content during lecture. Consistent communication between each instructor and the central PLTL office is extremely important to properly disseminate the appropriate content considered to be reviewed after lecture and should an instructor fall behind at any point in the semester.

The FIU PLTL program runs about 300 workshops a week. The rooms used, are general university classrooms that have movable seats, to allow the proper arrangement (circle or semi-circle) in each workshop. The goal is to pull away from the instructor-centered learning model to focus on peer-to-peer student-centered learning. Having a circular or semi-circular seating arrangement to appeal to an effective discussion format is crucial to foster a student-centered learning environment (Roth *et al.*, 2001).

Funding

Funding is often a concern for most educational programs at many universities. While many universities offer PLs a stipend each time they lead, FIU has alleviated the necessity for monetary compensation with educational incentives. PLs are awarded either community service hours or enroll in a research credit. Based on PL performance, FIU PLTL also provides PLs with letters of recommendation as required. With the extensive size of the program, it would not be feasible to pay all PLs. Funding that is awarded to the program is used to pay for administrative costs, which included the salaries of the PLTL staff, supplies, and conference travel when necessary. This allows for the continuation and expansion of the program.

In addition to these in-person workshops, FIU PLTL also offers several online cyber PLTL (cPLTL) workshops for some courses. In 2011, Indiana University Purdue University Indianapolis (IUPUI) received a Next Generation Learning Challenges grant to fund the development and implementation of a fully online version of PLTL. FIU received a sub-grant to implement these online PLTL workshops. This enables more students to participate in PLTL by allowing them to participate in real-time wherever high-speed internet is

available. This is conducted synchronously, and involves the use of webcams, headsets with microphones, and personal document cameras. Students and PLs that participate in cPLTL also undergo additional training to understand the functioning of online PLTL(Mauser *et al.*, 2011).

Conclusion and Future Aims

The FIU PLTL program continues to function using this administrative model. The PLTL program will continue to expand into new courses. Ultimately, FIU PLTL workshops will be offered in the majority of Biology courses. The program also has plans to continue the online cPLTL workshops, expanding into more subjects.

The centralized PLTL model continues to prove to be an efficient, self-sustaining form of implementation. It allows for the standardization of workshops, which enables students in the program to know what to expect in their workshops, regardless of their current coursework. This model allows for the introduction of fewer variables, when assessing the impact of the program on students and PLs. The presence of the same personnel over various semesters facilitates the longevity of the program, and ensures high quality performance.

References

- Gafney, L., and Varma-Nelson, P. (2008). *Peer-Led Team Learning: Evaluation, Dissemination, and Institutionalization of a College Level Initiative*. In: *Innovations in Science Education and Technology Vol 16*. New York, NY: Springer.
- Mauser, K., Sours, J., Banks, J., Newbrough, J. R., Janke, T., Shuck, L., Zhu, L., Ammerman, G., and Varma-Nelson, P. (2011). Cyber Peer-Led Team Learning (cPLTL): Development and implementation. *Educuse Quarterly*, 34, 4.
- Roth, V., Goldstein, E., and Marcus, G. (2001). *Peer-Led Team Learning: A Handbook for Team Leaders*. Upper Saddle River, NJ: Prentice Hall.

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