



Instructional Engagement in Person and Online: Making the Case for Peer-Led Team Learning

A.E. Dreyfuss*

Learning Developer
New York, New York
aedreyfuss@aol.com

Aaron Barlow (In Memoriam: December 1951- January 2021)

Department of English
New York City College of Technology, City University of New York

Ana Fraiman

Department of Chemistry
Northeastern Illinois University

James E. Becvar

Department of Chemistry
University of Texas at El Paso



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A.E. Dreyfuss*, Aaron Barlow, Ana Fraiman, & James E. Becvar

Learning Developer
New York, New York
aedreyfuss@aol.com
aedreyfuss@aol.com

Abstract

The transfer to the online environment in teaching necessitates artful communication so that students can gain from inquiry-based learning. As instructors use either in-person or online content delivery, Peer-Led Team Learning (PLTL) is one model that provides a solution to engage students in the learning process. The Peer Leaders, mentored by faculty, are the bridge between instructors and students. PLTL supports direct human interaction in both physical and digital environments for enhancing immersive learning and addresses the important task of preparing students for the 21st century.

Key words: 21st Century Skills, Teaching, Peer-Led Team Learning, Inquiry-Based Learning, Engaging Students, Communication Skills

Introduction

The arenas for teaching have expanded from the physically proximate (in person) to online situations in recent decades. Yet there is an art to teaching online, as it is a different medium than physical proximity. It is one where transference of skills is possible, though it requires consciousness and attention to details often taken for granted in the physical classroom. Peer-Led Team Learning (PLTL) is one solution to engagement.

Instructors' pedagogical tools have included digital technologies since at least the 1990s. "Smart" classrooms have internet access and some AI availability. Students can work in small groups using their cell phones to text, in silent conversation, for example. Instructors communicate with students via email, websites, and educational platforms (such as BlackBoard or other learning management systems (LMS), and assignments may have digital, collaborative components like wikis (Elliot & Fraiman, 2010). How best to use the evolving tools has been shaped by training in digital resources institutions require for hybrid and online teaching.

Such digital technologies had been seen as augmentations to the traditional lecture, flourishes as means for memorable classroom instruction. Then, in the three years of the COVID-19 pandemic, digital technologies used in the classroom were supplanted by online instruction through platforms such as Zoom or Teams, the lecture form predominating as a base for instruction.

What has actually been required of the student? Postman and Weingartner, in 1969, questioned the efficacy of only listening to the instructor. "Mostly, they are required to *remember*. They are almost never required to make observations, formulate definitions, or perform any intellectual operations that go beyond repeating what someone else says is true" (p.19). The instructor expects the student to attend in agreed-upon behaviors of looking (generally) to the front of the room, without distraction from cell phones, food, or side conversations. The instructor has control of the environment, allowing for observation of the student's attention.

Similarly with the online environments which, like a classroom, say 'give us your attention.' Yet the student's proximate physical environment may well be filled with distractions from family, food, friends. The online environment assumes students can ignore important forces in their lives and concentrate on the single medium before them at the moment. This is a difficult situation, compounded by the inequity of access to digital services, as well as assumptions about the environment where noise, privacy, and comfort may all be problematic. Anyone trying to teach – whether synchronously or asynchronously - has to be aware of impediments of digital and physical issues and consider how to negotiate these.

Teaching and learning

Teaching has been buffeted in a long-standing discussion between the roles of “the sage on the stage” – the dispatching and transfer of knowledge through the expert’s lecture - and “the guide on the side” – facilitating learning through guided activities. Neither position works well online. Lecturing can easily be ignored – dark rectangles on a screen let the instructor know little about students. Facilitated learning, “the guide on the side,” demands a reconsideration of teaching where physical proximity allows for constant, dynamic interaction. No matter how well produced, there is student inactivity, as students disengage by turning off their video, and even the audio functions.

Are teaching and learning more than the content? Morris and Stommel (2018) note: “Educators and students alike have found themselves more and more flummoxed by a system that values assessment over engagement, learning management over discovery, content over community, outcomes over epiphanies” (p. 4).

Online platforms appeared to approximate a means to providing content through synchronous or asynchronous lecture in Spring 2020. Many instructors see the digital as a poor approximation of the classroom (which it is) but may not consider that communication online has to take a different tone entirely from the personal interactions they had been used to.

Barthes (2007) notes that power resides “in the very fact of speech” (p. 192) and not in what is said: “Nothing to be done: language is always a matter of force, to speak is to exercise a will for power” (p. 192). The assumption of the power inherent in the instructor’s role, to be the person speaking, precludes explicitly creating opportunities for students to be active participants. Students recognize this and often rein in their own speech. This may be due to their discomfort with a sense of being exposed if they were to make a mistake, or afraid of being embarrassed, or not feeling comfortable as to how to interject a question or comment. The difference in power diminishes between the instructor and students when the classroom becomes a space for inquiry, and the space for questions and discussion becomes evident. When the sense of hierarchy is present during class presentations, participation by students is diminished, whether in the physical classroom, or in synchronous discussions or asynchronous online forums.

Both the classroom and online learning environments can be the source of a problem-posing education, “a space for asking questions — a space of cognition not information” (Morris and Stommel, 2018, p. 5) where education is based on mutual creation of knowledge, not consumption. If online education is to really work, ‘problem-posing education’ needs to be the model. Morris and Stommel (2018) remind us that:

The computer is a mere intermediary, not a tool as much as a vessel, a transport, a 'carrier' (p. 7)...Far too much work in educational technology starts with tools, when what we need to start with is humans....what we most need to change is our thinking and not our tools" (p. 9).

The environment of the content transfer mode is necessarily passive, where students have learned to conduct themselves in a tacit understanding of behavior. In hindsight from the Spring 2020 experiences, creating entirely new assumptions need to be made explicit, and shared with students before classes begin.

The content and its counterpart, the medium (McLuhan, 1964) are equally important to teaching. However, understanding the medium necessitates incorporating new methods into our class structures.

Online, everyone is both upfront and removed. It is easy for a student to misconstrue what is said for they do not have the whole facial and body cues available in a face-to-face interaction. This extends to conversations and tone in online platforms, for the visual information is limited in comparison to a face-to-face situation.

Alternative ways of supporting students to meet expected standards of performance require a different kind of leadership, finding ways to encourage and convince our students to be engaged. The goal online as well face to face is to inspire and advocate for our students' success.

Critical skills

A particularly critical pedagogical skill is questioning, one of the skills we all want students to develop. That this was a truism more than fifty years ago was noted by Postman and Weingartner (1969): The "most important intellectual ability man has yet developed [is] the art and science of asking questions" (p.23). Questioning, one of the skills needed to succeed in the 21st century, must be incorporated in pedagogy for teaching, either online or in person.

Increasingly, "work" in nearly every workplace requires multitasking, good communication skills, and working with colleagues in teams. Information, while often readily available, demands judgment as to its reliability and an ability to connect some portion to a larger whole. "Learning is shifting from learning *that* to learning *how*, from content to process" (emphasis added) (Davidson and Goldberg, 2012).

What are the necessary skills for the 21st century's workplace? These include the skills of communication, critical thinking, problem-solving, collaboration and teamwork, and development of leadership among others. To foster the "conditions of learning" (O'Brien,

1998, p. 94), students must be enabled to be actively engaged. “We are currently preparing students for jobs and technologies that don’t yet exist... in order to solve problems that we don’t even know are problems yet” (Fadel, 2008).

Engaging learners

Keller (1968) recognized that it does not pay to replicate the traditional classroom in online situations. In studying military training, he observed that there were two distinct roles: the role of “classroom instructor” focused on student participation, by means of guiding, clarifying, demonstrating (p. 79); and the “training officer [who] dealt with matters of course logistics, the interpretation of training manuals, the construction of lesson plans and guides, the evaluation of student progress” (p. 80).

The Peer-Led Team Learning (PLTL) model (see www.pltlis.org), developed in the 1990s, pivots on the Peer Leaders, students who have successfully completed the course and are prepared for the role of facilitator of small groups, the current students in a course (Gosser, Kampmeier, & Varma-Nelson, 2010). The Peer Leaders are ‘novice experts’ and are prepared to encourage discussion, questioning, problem-solving, and modeling, leading the group of students to learn. The Peer Leader is the “untapped resource” in higher education – the bridge between faculty and students in the class.

Why are Peer Leaders so important? The Peer Leader is “the more capable peer” (Vygotsky, 1978, p. 82) helping fellow students to learn course content in weekly “workshop” sessions. In leading their group of students, they promote the skills that transfer to the changing workplace.

The sessions depend on communication by all participants: listening to others’ views, voicing one’s own, even through silence (Dreyfuss, 2021), solving problems or discussing the course material, writing in the symbols of the discipline, and reflecting on what has been learned as well as on the process of learning. Critical thinking is foundational in the practice of PLTL (e.g., Quitadamo, et al., 2009) in conceptualizing and analyzing the material, and evaluating information from different sources through reasoning and reflection.

The Peer Leader acts in the role of facilitator of a small group to learn and in so doing focuses on the process of the dynamics of group members. This awareness of diversity encompasses not only cultural, generational, and other individual identities, but also capability, prior knowledge, approaches and ways of learning, which provides a means of acting in concert with others. As Pike and Kuh (2006) note, even on campuses that advertise “diversity” in the student population, there is little need to engage with others if one does not want to do so.

The heterogeneous nature of scheduling and assignments to workshop sessions provides a serendipitous and fortuitous method to work closely with diverse others. Such

sharing of viewpoints enriches members' problem-solving skills, and at the same time develops the sense of collaboration and teamwork that becomes even more important in the workplace. Further, the Peer Leader, in facilitating the group's activities, is able to practice nascent strategies of leadership (Dreyfuss, 2012).

Many studies have examined aspects of PLTL (see Publications at pltlis.org). These initially focused on improvements in student performance (e.g., Hockings et al., 2008; Gosser, et al., 2010; Darnell, et al. 2013; Alberte, et al., 2014); student retention into higher level courses (e.g., Wamser, 2006); and notice taken of inclusion of those who have often been waylaid in STEM fields but benefit from PLTL: women and underrepresented minorities (e.g., Preszler, 2009; Snyder, et al, 2016; Hickman, 2016). Other studies examined the benefits to Peer Leaders (e.g., Alberte, et al., 2013b), and the transition to the workplace (e.g., Gafney & Varma-Nelson, 2007; Chase, et al., 2020). Meta-analyses have further examined the meta-themes of studies (Wilson and Varma-Nelson, 2015; Guden & Bellen, 2020). And PLTL provides exciting pathways for innovative research such as discourse analysis (Sawyer, et al., 2013) or combining models (Lewis & Lewis, 2005).

The tacit assumption of these studies is that the preponderance of weight regarding academic improvement will convince faculty and administrators to implement such a useful academic intervention; after all, while it started in chemistry, it encompasses STEM fields and has been successful in non-STEM courses (e.g., Barlow, et al., 2013; Sherman, et al., 2015; Tuzlukaya, et al., 2022). PLTL benefits students and Peer Leaders, whether at research universities or community colleges (Gosser, et al., 2010).

Yet only by inference are the instructors of courses incorporating PLTL addressed to consider the effect of working directly with Peer Leaders. The *how* in addressing instructors examines such practicalities as scheduling (Becvar, et al, 2008); and how to conduct PLTL workshop sessions online (Mauser, et al., 2011; Alberte, et al., 2013a).

The weekly meeting between instructors and Peer Leaders prepares and provides direction to Peer Leaders on content and facilitation techniques (McWilliams, et al., 2019). Whether actually meeting (in person or online) or through asynchronous communication such as email, alignment is critical so that students practice in workshop sessions what they have been presented in the "class" (whether in-person or online) and will see on examinations. The information on content is sometimes accompanied by direction on facilitation (Tien et al., 2004).

PLTL provides a direct link to students, which benefits instructors: they obtain feedback on students' understanding "just-in-time" from Peer Leaders after weekly workshop sessions. These meetings promote an ongoing collegial relationship between instructors and Peer Leaders. Working with Peer Leaders provides fresh viewpoints on teaching, which may

lead to developing an interest in scholarship of learning and teaching; it may also provide opportunities for mentoring and developing new pathways to research interests.

Reconciling in-person and online instruction: Adapt and improve

PLTL gives the opportunity to develop something new, flexible, and powerful, a pedagogical base that recognizes the importance of direct human interaction in learning while making use of the increasingly powerful digital tools at our disposal. What is introduced is an intermediary between the instructor and the student, the Peer Leader, who can evaluate the understanding of the student, and is not viewed as intimidating the way an instructor may be perceived. The Peer Leaders provide a medium for communication with all the students in a course and its instructor.

This humane pedagogy is relevant to both in-person and digital instruction, making clear that there is the inquiry-based melding of two modes. This is close to what Peer-Led Team Learning has provided as a model, and what a good education today with a strong digital component could be, and it lays the groundwork for a pedagogical model that can move online if need be and then back into a physical space. PLTL provides a means of re-envisioning the classroom in a changed educational environment. Pedagogical assumptions in terms of content and its mastery can be enhanced to include engagement and inquiry with students.

What has been learned through the necessarily forced use of online media are certain other kinds of behavior often ascribed to transferable skills. Far from neglecting these kinds of behavior, careful thought reveals the need to teach these ‘special abilities’ as explicit educational objectives.

Where information is available in the tip of their fingers, students whose interest and curiosity are already piqued can capture content knowledge (Davidson and Goldberg, 2012). Few students can easily become autodidacts. They need to be part of something, to feel their contribution—even their own learning—is valued. Instructors must recognize that in-person or online situations need to be tailored toward the motivational through community and enthusiasm. Some suggestions for this transitional journey are offered for instructors working with Peer Leaders:

1. Take on the role of a learner. Ask questions of the Peer Leaders with whom you share students.
2. Support paths to improvement. While judgment is part of instructional duties, discuss options so that no student believes that they are mired in mediocre performance.

3. Scaffold assignments toward specific goals reached by small steps that lead to conceptual learning. What can help provide reinforcement and build on prior knowledge? Allow for clear student understanding of what accomplishments add up to what grade.
4. Respond to Peer Leaders' and students' queries and comments. This keeps students from setting aside the tasks for our courses in favor of other demands on their time.
5. Provide explicit information on availability and boundaries, whether physical or digital "student hours." Peer Leaders can aid with such efforts.
6. Demonstrate flexibility. Not everything asked of students will be possible for every student. Having the Peer Leader mediate will allow revisions of deadlines in individual cases and even reworking of assignments as necessary for differing situations of accessibility and even disability. One size, even one standard, does not fit all—and needn't. Learning happens at different paces and different levels even when the goal is singular.
7. We all need to be willing to change and demonstrate that we are able to do so.

Peer Leaders as partners

The changes that instructors must negotiate in working online pertain to Peer Leaders as well. Such efforts were noted by Peer Leaders (Love & Becvar, 2021). Foundational to contemporary teaching is that the instructor be conversant not only in the digital tools available, but also has grounding in the scholarship of teaching and learning. Dewey's aphorism of 'we learn what we do' (1966/1916) extends to activity in the learning sphere. The pedagogy suggested by Morris and Stommel (2018):

- centers its practice on community and collaboration;
- must remain open to diverse, international voices, and thus requires invention to reimagine the ways that communication and collaboration happen across cultural and political boundaries;
- will not, cannot, be defined by a single voice but must gather together a cacophony of voices;
- must have use and application outside traditional institutions of education (p. 9).

By modeling such pedagogy of inquiry, openness and change, and working with Peer Leaders, instructors will have a consistent means of checking on the learning progress of their students, in effect, constant formative assessment of their teaching. This initially takes

willingness and energy, yet effectively serves to prepare Peer Leaders and their students for a changed learning environment, and a flexibility to work both in physical and digital spaces.

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