

How to Entangle Peer Educators

Laurel Whisler

Clemson University

Paul Treuer

Educational Consultant

Managing large-scale academic support programs, led by peer educators, poses a challenge for limited staff to provide high quality training. Drawing on their experiences managing large university peer-learning programs, the authors propose a unique learning framework that meets the challenge of providing consistently high quality peer educator training with limited instructional staff. Named by the authors Entangled Learning™, this framework is introduced at Clemson University to peer educators during their initial training to deepen their learning throughout their involvement in the program. Descriptions of how this learning framework is introduced, used, and perceived by instructional staff and peer educators are presented in this article.

How to Entangle Peer Educators

In our respective experiences with academic support programs in public universities, recently we have observed an increase in motivation of students seeking experiences as peer educators. While simply having a good job on campus was once the motivation, peer leaders now seek experiences that permit them to support others' learning and deepen their own learning as well. This rise Laurel Whisler is Assistant Director and Coordinator of Course Support Programs with the Westmoreland Academic Success Program, Clemson University. Phone: 864-656-6214 Email: lwhisle@clemson.edu

Paul Treuer is a retired University of Minnesota Duluth educator who serves as an educational consultant. Phone: 218-341-7813 Email: paul.treuer@gmail.com

in interest may be a function of a phenomenon unique to the 21st century called “a new culture of learning” by Thomas and Brown (2011). These authors claim that students raised in a digitally connected, socially networked world use new media forms that make peer-to-peer learning easier and more natural. As a result, many learners today are actively engaged in learning environments called “collectives,” where “people belong in order to learn” (p. 52). We notice a similar trend in academic support; there is a pronounced shift towards an increased desire on the part of students to participate in peer-to-peer learning.

In *Students Helping Students*, their widely used book for training peer educators, Newton and Ender (2010) describe peer educators as “students who have been selected, trained, and designated by a campus authority to offer educational services to their peers. These services are intentionally designed to assist peers toward attainment of educational goals” (p. 6). The general flow of support is from program staff to peer educator to student receiving academic support. This support model of training is effective when there is ample program staff for a relatively manageable number of peer educators.

Historically, peer educator training has been conducted in two primary types of programs (Whitman, 1988, p. 38). In one, peer leaders are trained in a college course. In the other, they receive training outside formal classrooms through a combination of workshops, online modules, mentoring, or assigned readings. Both of these types have limitations for large-scale training programs.

A new model is needed, which addresses both the quality of the training and logistical challenges.

Foremost among the challenges is solving how academic support professionals can provide high quality training every semester, particularly in programs employing large numbers of peer educators, many of whom serve for multiple semesters, in order that peer-to-peer learning remains rigorous, continuous and aligned with desired learning outcomes. Our experience with peer educator training and management is that staffing does not increase in proportion to the increase in peer educator programs. Training models described by Newton and Ender do not adequately scale when the number of peer educators grows.

As a result of the limitations with existing training models, we developed a scalable learning framework called Entangled Learning™ (EL) that engages peer educators in deep learning throughout their practicum so that they can model and transfer these skills to other peer educators and, possibly, to students receiving assistance. This model scales in such a way that as the number of trained peer educators increases, proportional staff time remains the same. Rather than providing a top-down model of academic support, Entangled Learning distributes responsibility for learning throughout a structured network of staff, peer educators, and students receiving academic support.

Staff in the Westmoreland Academic Success Center (ASC) at Clemson University are in their third academic year of implementing the EL framework. It is

a model in which peer educators are given skills and tools to direct their own learning in an environment characterized by active participation in peer-to-peer learning groups uniquely structured around the EL framework. Through the ASC, peer educators are *entangled* with one another as avid co-learners who help each other develop knowledge and expertise specific to their subject area and type of peer assistance. Preliminary indications suggest that this model energizes and empowers students to direct their own learning, thereby realizing learning independence while at the same time building peer-to-peer learning networks.

What it Means to be Entangled

Brett Sherley, a Clemson University student, shared with us a reflection from a recent experience of attempting to coach students in a learning community. In part, she wrote:

This really had me thinking today. I kept going over in my head what the actual purpose of a professor is in college. For me, most of my learning is done outside of the classroom. I am given a textbook, a list of topics I need to know, and very brief explanations of ideas. It is up to me to study the material, wrap my head around the ideas, and go get help when I need it. I thought hard today on whether or not the presence of the teacher in a classroom setting was actually necessary. Obviously there is a need for explanation in some manner, but I think them standing in front of the class and reading the slides (that we already have and can read for ourselves)

is a bit redundant. What if all the classes were instead entangled? What if there was a way to communicate the learning outcomes to the students and then scaffolding was put in place to guide the students in forming communities, so that learning is facilitated by peers. Students would be held to a higher degree of expectations because the responsibility of the learning would be put on us. Communities would foster learning in helping one another explain ideas and grasp concepts. Documentation and reflections could serve as “tests” to what we have learned. Then the production of a learning portfolio both for individual classes and then for college overall would serve as proof of what we have learned. I know today, if I had to synthesize what I learned last week in organic chemistry, I wouldn’t be able to give you much, because sometimes I just learn to do well on the test, rather than learn to know the material. The approach I discussed above would totally change this dynamic because students would be forced to learn the material in order to synthesize what they know and prove that they learned it and be able to explain how they learned it. I think I’m finally starting to figure out EL and its reach!

(B. Sherley, personal communication, October 11, 2016).

Whereas any new learning framework must be relevant to current economic conditions as it aims to provide greater efficiencies in academic support program training and management, it must also be relevant for the

cultural conditions in which most of our students actively participate. Herein lies an extremely important point made in *A New Culture of Learning* (2011). The authors claim, and we agree, that in the new culture of learning “the classroom as a model is replaced by learning environments in which digital media provide access to a rich source of information and play” (p. 37). A second major difference is that the new culture of learning “focuses on learning through engagement *within* the world” (p. 38). Entangled Learning is a framework that is not only cost-effective -- it is also relevant for our cultural milieu. The quotation from this Clemson student (above) attests to the importance of, and excitement in, directing one’s own learning in community with peers. Peer-to-peer learning permeates the 21st century generation of students.

The Entangled Learning framework we are proposing leverages the propensity for, and interest in, peer-to-peer learning. EL can be visualized (Figure 1) as consisting of a triad of three interconnected spheres of Practice, Social Learning, and Deep Learning. Peer educators, such as tutors, actively work and learn together with other tutors in all three spheres. This is what it means to be entangled.

A peer educator, in our example a tutor, becomes engaged in the **practice** of tutoring with other tutors through peer-to-peer learning. Practice is the application of learning to real life situations; it is putting one’s knowledge to work. Using Thomas and Brown’s terminology, tutoring is the practice in which students

learn through “engagement within the world” (p. 38). Peer educator training is linked directly by the curriculum to participation in Practice Groups (Wenger-

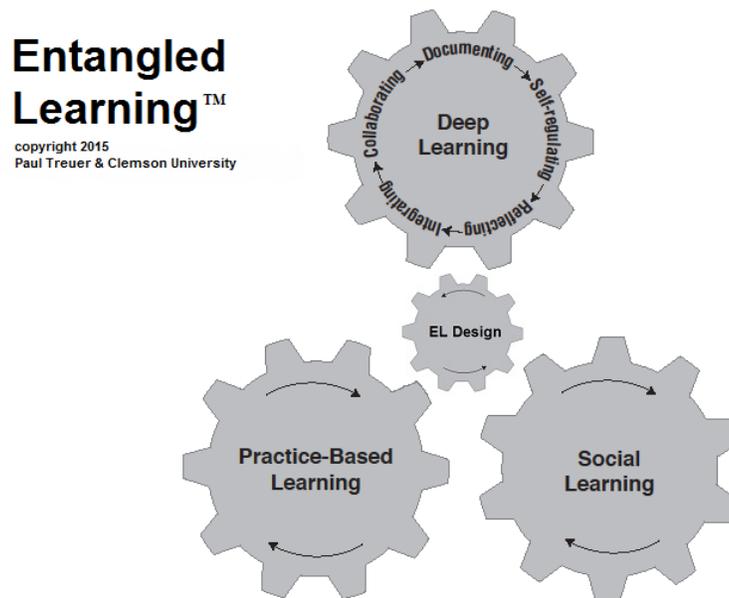


Figure 1. Entangled Learning Model

Trayner and Wenger-Trayner, 2015). Concurrent with their training practicum at Clemson, tutors are engaged in Practice Groups of their own choosing.

The structure of these groups is based on **social learning** theory as it is applied to communities of practice (Wenger, McDermott, and Snyder, 2003).

Participants meet as equals to design and advance their learning around common questions and interests. Confronting new ideas, having their perceptions challenged, and interacting with people holding a diversity of perspectives enriches and enlivens learning.

The third sphere in Figure 1 encompasses a process in which group learning participants **deepen their learning** by examining in a structured way what it is and how they are learning. The Deep Learning Cycle is built on work describing the importance of reflective documentation described by Jenson and Treuer (2014). A learning group of Biology tutors, for example, may decide to delve into the question of how to teach statistics to entry-level students studying genetics. Through the Deep Learning Cycle the tutors document how they plan (design) an approach to their learning. The tutors then document how well their learning is taking place in terms of their changed behaviors, critical reflections, integration into their tutoring sessions, and how their collective team is working to effect their learning. Most communities of practice go through multiple iterations of the Deep Learning Cycle as they deepen their learning through the quest for answers to new questions.

The role of instructional staff in the academic support center is critically important to the process of entangling peer educators. First, because most of our peer educators have not been previously invited to direct their own learning, we introduce all peer educators to the basic concepts and tools core to Entangled Learning. Early in the peer educator training, the instructor facilitates the formation of Practice Groups. It is not uncommon for the instructor and experienced peer educators to serve as coaches to the Practice Groups to help them become, and stay, entangled. The instructor, as program designer, provides scaffolding to help participants as they design and assemble evidence

of reflective learning. Finally, the instructor reviews learning portfolios containing a narrative interwoven with embedded evidence of learning.

Peer educators moving beyond the training course continue to participate in Practice Groups. The mix of experienced (EL Coaches) and novice members in the groups contributes to the diverse makeup of these groups. The fact that some of the tutors and review session leaders have multiple semesters of experience with academic support as well as with Entangled Learning adds an important dimension. The more peer educators there are who are entangled, the easier it becomes to operate a high quality, large scale program. Developing learning independence is the cornerstone of these efficiencies.

Clemson's Peer Educator Training Program

Clemson's Academic Success Center, founded in 2001, is located in its own building in the heart of campus. Recent reorganization within the ASC aligned the services of tutoring and Supplemental Instruction into the Course Support Programs area. Peer leaders in these service areas are trained and supervised by ASC staff. It is not uncommon to have more than 180-200 peer leaders employed in any given semester. They provide upwards of 40,000 student contacts through tutoring and review sessions each year. Staff support includes a coordinator, two full-time assistants, and two graduate assistants. Initial training includes independent work with pre-training modules and one-and-a-half days of intensive training and mentoring by experienced leaders.

Peer leaders additionally enroll in a mandatory 1.0 credit, P/NP training course (CU1110) the first semester in which they are hired. Coupling the training course with the start of their practice of tutoring or facilitating review sessions engages leaders immediately in real world learning through integration and reflection. Approximately 40-100 new peer leaders are enrolled in the training course. The course meets for 10 weeks, 75 minutes each session. To accommodate student schedules, the course is divided into 3 to 5 sections. Each section becomes its own community of practice as the students develop social ties within and among areas of practice. Course sessions feature a combination of discussion and group work with minimal lecturing. Satisfactory completion of the course qualifies peer leaders for continued employment in subsequent semesters, some of whom are hired and trained to be coaches for other peer educators. The full-time program coordinator is allotted only 25% of her time to teach CU1110 and oversee peer educators during their practicums.

The course learning outcomes for CU1110 are aligned with program goals and CRLA certification content areas to provide high quality academic support for all segments of the student body. This is translated into outcomes that stress skill development, application of learning theory, engagement in critical thinking, and demonstration of learning in their practice. Peer leaders demonstrate mastery of foundational and advanced practice-based learning outcomes clearly identified in the syllabus.

Students enrolled in CU1110 are introduced to, and supported to apply, Entangled Learning theory and practice from the beginning of their training. It is assumed that most, if not all, first semester leaders are being introduced to EL for the first time in this training. It is a course expectation that peer leaders will participate in Entangled Learning groups since a significant part of the course is facilitated in student-led groups. The following summarizes the primary ways in which peer leaders are entangled in CU1110.

Introduction to Entangled Learning. The course instructor provides an overview of the theory and practice of EL at the beginning of the semester. The rationale for the triad of EL experiences of Practice-Based Learning, Social Learning, and Deep Learning (Figure 1) are clearly explained in this introduction. The introductory presentation is supplemented with readings in the Peer Leader Manual prepared for Clemson peer educators. The manual and course materials include explanations of online tools for collaboration, record keeping, scheduling, and documentation of learning. Prominent tools include Google Apps for Education for shared storage and collaborative editing of documents, Google Sites or Wix for portfolio development, and scheduling websites such as When2Meet.

Participation in Practice Groups. Starting in week three, peer leaders break into smaller (2 - 5 students) communities of practice, called Practice Groups. These

groups are formed according to similar questions of inquiry in pursuing common knowledge and skills to improve their work as peer educators. Often, but not always, members of Practice Groups include both tutors and review session leaders. Students most often participate in their Practice Groups during class time. Typically, once Practice Groups are formed and profiles for introducing themselves are shared, the groups will go through an activity to identify common values and mutual expectations. The importance of respecting values and differences in a group that shares equally in its pursuit of learning, group facilitation and decision making is core to social learning in communities of practice. The group then identifies areas of common inquiry. Learning designs are developed by the group to move to greater understanding around these areas of inquiry. Both the process and the products of this learning are well documented by group participants. Documentation includes evidence of all parts of the Deep Learning Cycle.

Coaching. Experienced peer leaders, who have been trained with EL, support Practice Groups by mentoring participants in areas such as how to collaborate effectively in their groups, how to design their learning, and how to document their learning. Coaches encourage participants to persevere through the unfamiliar processes of documenting and reflecting on their learning. Importantly, they support participants to overcome conflict and frustrations that are natural parts of deep learning.

Supporting Activities. Scaffolded assignments developed by the course instructor model a process for engaging with the content. These are given to all participants at strategic times throughout the semester. For example, early in the semester, shortly after the Practice Groups have formed, students receive a set of questions that model the thinking process of creating a learning design on the group's choice of content. Likewise, writing prompts guide students towards critical reflection about their learning. Evidence of all stages of the Deep Learning Cycle (Figure 1) is supported with structured assignments. Some stages, such as critical reflection, are scaffolded in multiple assignments. A list of course outcomes is provided with prompts to use evidence from their practice, such as peer observations, to document their competence in outcomes they select as their focus for each half of the course. Readings or videos give the peer leaders a variety of credible, research-based sources from which to draw ideas to integrate into their approach to sessions. The activity includes reflective prompts that form the basis of group discussions in class.

Course Assignments. At the end of the semester each practice group makes a class presentation on their learning. They also present to the instructor a group portfolio. The online profiles that participants developed when forming Practice Groups are expanded to become Learning Portfolios that include reflections and well-documented evidence of learning aligned with course learning outcomes.

The Learning Portfolio is a component each student's final course grade. Assignments are evaluated using the "specifications grading" method (Nilson, 2013). Written assignments that substantially address the writing prompts and provide evidence for proficiency in the learning outcome receive credit for completion. Unsatisfactory assignments are returned with comments for improvement and an opportunity to resubmit.

The result of successful completion of CU 1110 is threefold: (1) peer leaders are well prepared with knowledge and skills to be tutors or facilitators of group review sessions; (2) peer leaders have a working knowledge of Entangled Learning as a means of self-directed learning; and (3) peer leaders have established networks of friends with whom they can collaborate to further their learning. In these ways, Entangled Learning prepares peer leaders to participate in communities that deepen their engagement.

Clemson ASC's Course Support Programs area has formalized this enhanced learning capacity into communities of practice that continue training after the first semester. For example, the Supplemental Instruction program, which numbers over 110 leaders each semester, is organized into communities of practice (CoPs) by supported course area (i.e. Business Calculus, STEM Calculus, Accounting, etc.) so that returning peer leaders mentor novices. Each CoP is facilitated by an experienced and highly effective peer leader who facilitates the sessions and guides the learning. The leaders of the CoPs form their own community of practice as well. Program staff meet with the CoP leaders

to guide and coordinate the leaders' program and administrative initiatives, as well as to support and develop their leadership skills. Practice Groups spontaneously form within CoPs as learning or program support needs arise. For example, one Practice Group has formed to develop the CoP leaders' initiative to make administrative processes paperless. Through these communities of practice, training throughout the program is continuous and scalable although the number of staff members remains fixed.

Staff and Student Responses to Entangled Learning

Clemson's Program Coordinator's Perspective

The coordinator of course support programs at Clemson University, and co-author of this article, Laurel Whisler, has been involved over the past three years creating, designing, implementing, training, and participating in EL Practice Groups. She designed the curriculum for the course and is responsible for entangling hundreds of students, fellow Clemson faculty and staff, and colleagues on other campuses. Her perspective is revealed through responses to the following questions.

Why do you entangle your peer training?

Active engagement and taking initiative! When I see peer leaders spontaneously form Practice Groups as they identify their own learning needs and interests, I

realize we are creating highly motivated, self-directed learners by entangling them.

What is the biggest change you have noticed with Entangled Learning?

The philosophical shift is dramatic both for the students and for me as program coordinator. In respect to the students, inviting student leaders to choose learning outcomes and activities for developing and documenting their learning is disorienting. Owning the freedom to choose what and how they learn represents a huge shift in their thinking. Another important shift in philosophical approach is for the coordinator to think more in terms of supporting and evaluating learning than in crafting and perfecting teaching. The shift from teaching to learning (Barr and Tagg, 1995) is strengthened by reinforcing practice-based learning experiences through reflective writing, which, by the way, is also useful for assessment.

What are some of the biggest challenges you have faced?

Program coordinators who choose to entangle their leaders must be prepared for a tremendous shift in their work. Developing effective scaffolding demands attention before and at the beginning of the training period. If the scaffolding isn't clear and simple, learners will expend undue energy trying to understand the activities rather than engaging with them. Coordinators must also be prepared for initial confusion, frustration, and push-back from peer leaders. Entangled learning

is active learning that asks much from the students. Only after they have gone through the Deep Learning Cycle a couple of times do the peer leaders begin to understand how powerful it is and embrace it for their learning.

What are your biggest rewards from entangling your peer educator program?

The effect on the Supplemental Instruction program of implementing Practice Groups has been striking! Once peer leaders organized around their own areas of common practice, they collaborated to develop solutions to common problems. This is when the deep learning takes place. Motivation is internal to the students, rather than being imposed upon them by an instructor. Another huge reward comes when members of a Practice Group suggest activities that support their own learning as they identify needs. It was mind-boggling to realize that the peer leaders are now supporting and directing their learning in really interesting and effective ways without any impetus or directive from me!

What will you do differently in the training course next semester?

I am going to work from the “less is more” maxim and simplify the course structure. Currently peer leaders make one pass through the Deep Learning Cycle for each activity, course topic, or learning outcome. This is great for providing breadth, but my intent will be to align activities to provide depth in fewer areas of intentional focus. Providing peer leaders with multiple iterations of the Deep Learning Cycle will open opportunities to refine their questions and to try

multiple approaches to their focused area of practice, thus building greater understanding and skill. I will alter how we use class time so that we can still address a broad range of skills and topics.

Clemson's Peer Educator Perspectives

Voices of selected Clemson students are shared as a way of shedding light on student perceptions about Entangled Learning. When reading the profiles, take note of the varied experiences these students have had as peer educators. Their various roles with Entangled Learning range across the spectrum from participants in communities of practice, to coaches, and even to program designers. These generous Clemson students have shared their portfolios which demonstrate their learning and high quality involvement that is taking place while being entangled in Clemson's peer educator training program.

Abby Stephan '18

Major: Language and International Trade with a concentration in Spanish and a minor in Anthropology

Peer Educator Experiences: Supplemental instruction Leader for Business Calculus (MATH 2070, 2 semesters), Community of Practice Leader for Supplemental Instruction Program (1 semester)

Roles with EL: Entangled Learning Participant (continuously), Entangled

Learning Coach (2 semesters), Entangled Learning Program Designer and
Module Creator (summer project)

Comment about EL: Entangled Learning is so much more than just a learning model. In addition to creating a more conscious learner, it creates a more aware individual, on an intellectual, social, and psychological level. Its flexibility allows it to be applied to virtually all aspects of life, and I personally have experienced its effects in unexpected places outside of an academic setting. Entangled Learning is a truly valuable tool, and I believe that I am a better person for having the opportunity to work so closely with it on a theoretical as well as a practical level.

Link to EL Profile and Learning Portfolio:

<http://atsteph8.wixsite.com/my-entangled-journey>

Michael Schmidt '18

Major: Genetics with a minor in Mathematics

Peer Educator Experiences: Supplemental Instruction Leader for General Chemistry (CH 1010, 2 semesters), Community of Practice Leader for Supplemental Instruction (since Fall 2016)

Roles with EL: Enrolled in CU 1110 class Fall 2015 structured with EL (1

semester), Promoted EL environment in Supplemental Instruction sessions and CoP sessions (3 semesters), EL Coach (1 semester).

Comment about EL: While I use Entangled Learning to enhance my academic capabilities, I also use it beyond scholarly applications. I have used EL to gain a better understanding of my thought process and reflect on my learning. This extends beyond just the classroom as I have spent the last two years reflecting on activities in my life and learning from daily events. The Deep Learning Cycle, particularly the reflection aspect, has proven instrumental in making me a more successful student and person.

Molly Makos '17

Major: Biological Sciences B.S.

Peer Educator Experience: Supplemental Instruction Leader for CHEM 1010/1020 (2 semesters), Community of Practice Leader for Supplemental Instruction (3 semesters), Undergraduate Teaching Assistant for Functional Human Anatomy (1 semester).

Roles with EL: Entangled Learning Participant (ongoing since December 2014), Entangled Learning Coach (2 semesters), Entangled Learning Program Designer

-- Module Creator and MCAT/DAT Exam Preparation Learning Community
(ongoing since Summer 2016).

Comment about EL: Before I was introduced to EL, I was an "every man for themselves," type of learner. I never expected that something like Entangled Learning would come along and be one of those defining factors in my life. However, after almost two years of working with it, EL has had a true impact on me. I am more open-minded, more willing to solve problems with the help of others, and much more likely to take a project, make it mine, and run with it.

Link to EL Profile:

<http://mmakos.wixsite.com/makosdiscoverel/collaborativeportfolio>

Conclusion

When peer educators receive training that prepares them for self-directed peer-to-peer learning, they not only become better peer educators, but they also deepen their own learning and illustrate these behaviors for others. A training model has been presented in this article in which peer educators participate in communities of practice to support one another to learn about common areas of inquiry. Their learning is deepened through a process called the Deep Learning Cycle in which their learning is well-documented by the peer educators themselves. Students who actively participate in a triad of common practice

(such as tutoring), communities of practice (Practice Groups), and self-designed deep learning are entangled within a community of peer educators. In its third year of implementation at Clemson University, Entangled Learning is catching on with staff as a highly effective way of training large numbers of tutors and review session leaders and with students as an exciting and empowering new way of learning.

The popularity of peer-to-peer learning in tutoring and review sessions signals a growth trend that may be occurring in other campus programs. Academic support staff who adopt Entangled Learning are well-positioned to influence student learning outside the classroom by partnering with coordinators of other programs who are seeking effective training models. Collaboration with other programs leverages the role of the academic support staff to develop skillful learners across campus.

Perhaps one of the most unexpected outcomes of entangling peer educators is their stated desire to entangle students they are helping. Although this was not the intent of using Entangled Learning with peer educator training, it suggests an area for potential development. Even more telling, it implies a viral component to Entangled Learning. Once a peer educator develops skills and tools for learning independence, they apply those skills to different subject areas, communities of peers, and varieties of practices.

References

- Barr, R. B., & Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change*, 27(6), 12-25.
- Jenson, J., & Treuer, P. (2014). Defining the e-portfolio: What it is and why it matters. *Change*, 46(2), 50-57.
- Newton, F. B., & Ender, S. C. (2010). *Students helping students: A guide for peer educators on college campuses* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Nilson, L. B. (2013). *Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills*. Sterling, VA: Stylus.
- Thomas, D., & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. Lexington, KY: CreateSpace.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston, MA: Harvard Business School Press.
- Wenger-Trayner, B., & Wenger-Trayner, E. (July 2015). *State-of-the-art workshop on communities of practice*. Grass Valley, CA.
- Whitman, N. (1988). *Peer teaching: To teach is to learn twice*. College Station, TX: Association for the Study of Higher Education.