

## Introduction, by Josie Walwema

Vewsletter Fall 2013 Where does the responsibility for learning lie, with the teacher or with the students? If it's with teachers, what do teachers need to know in order to teach well? These questions have plagued the teaching profession for years. As evidenced by the plethora of symposia, workshops, conferences, research, and other settings in which best practices are shared, the teaching profession is committed to promoting learning in the classroom.

Competency in subject matter and pedagogical skill is one that teachers are measured by throughout their careers. And yet it is not an easy task to separate content and pedagogy, tantamount as they are, to one body of understanding. Assuming that teachers begin with a level of expertise in their knowledge base, how they present that knowledge in the classroom is a distinguishing factor. It manifests in the way teachers develop new explanations, devise new demonstrations and clarify old ideas. This is why, in this issue, we celebrate Barbara Oakley and Mark Doman, who, last year, won the teaching excellence awards. Dr. Oakley, an Associate Professor of Engineering and Dr. Doman, the Pawley Professor in Lean Studies, credit their winning to a dogged determination to find what works in the classroom.

Dr. Oakley has looked to research in neuroscience and cognitive psychology, which she credits with inspiring her forthcoming book. Dr. Doman bases his classes on theory and research to inform his pedagogy. Both professors demonstrate that teachers are constantly inventing new ways of teaching and learning. They show that success in teaching and learning calls for a proper blending of two crucial aspects of a teacher's capacities: attention to the content aspects of teaching and pedagogy.

## **Teaching and Learning Committee Members**

- Chair: Chhabi Govind (CAS Biological Sciences) -- 2012-2014
- Susan Awbrey (Senior Associate Provost)
- Greg Allar(CAS) -- 2012-2014
- Amy Rutledge (SBA) -- 2012-2014
- Mary Dereski (SOM) -- 2013-2015
- Kim Holka(SON) -- 2013-2015
- Josie Walwema(CAS) -- 2013-2015

- Cynthia Carver (SEHS) -- 2013-2016
- Rebecca Cheezum (SHS) -- 2013-2016
- Katie Greer (KL) -- 2013-2016
- Michelle Southward (AP Assembly) -- 2012-2015
- Nic Bongers (AP Assembly) -- 2013-2015
- Judy Ableser (CETL Director) -- 2013-2014

## CALL FOR NOMINATIONS

The Senate Teaching and Learning Committee is pleased to announce a call for nominations for the 2014 Teaching Excellence Awards. Two awards will be made: one to a tenured or tenure-track member of the faculty; another to a non-tenure-track faculty at Oakland University. Each award includes a cash stipend and will be presented at the Annual Faculty Recognition Luncheon.

Nominations may be made by any member of the Oakland University community, including students, faculty, alumni, administrators, and staff. Student nominations are a highly valued component of this process. Faculty are encouraged to announce this process in all classes. Faculty may not self-nominate for the Award.

The letter of nomination should address the nominee's accomplishments based on the following criteria:

- · Teaching, methodology and innovation
- · Impact on student learning
- Continued growth and development in teaching

Nominations will be accepted through December 6, 2013. Nomination should be completed using the online nomination form (http://goo.gl/DRaFYJ). The Committee will contact the nominees about how to supply the required materials. Previous Teaching Excellence Award winners and current members of the Teaching and Learning Committee are not eligible. A plaque with the names of previous Teaching Excellence Award winners is on display in the lobby of Kresge Library.

Click here for the nomination form.

## The Teaching & Learning Committee (TLC)

The Center for Excellence in Teaching & Learning (CETL)

#### TLC & CETL

## 2013 Teaching Excellence Award Winners Presentation

We are proud to co-sponsor a special session highlighting and celebrating the teaching excellence of our 2013 Teaching Award Winners.

and

## Barbara Oakley

Ph.D., Associate Professor of Industrial & Systems Engineering Excellence in Teaching award, Tenure Track

## Mark Doman

J.D., Special Lecturer Education Human Resource Development Excellence in Teaching Award, Non-Tenure Track

Come and hear their stories and learn tips on how they engage, inspire and connect with students.

## Monday, November 18th, 2013 12:00 pm—1:30 pm

200A Elliott Hall (The Learning Studio)

Lunch will be provided

To register visit: www.oakland.edu/cetl and click on "extras & upgrades" workshops





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Phone: 248-370-2466 Fax: 248-370-4106 E-mail: cetl@oakland.

By Barbara Oakley, PhD, PE,

# Learning Lollapalooza

2012-2013 Teaching Excellence Award Winner - Tenure Track

One of the most thrilling realizations of my lifetime is to grasp that now—at this very instant—we are at the cusp of what will be called the 21st Century Revolution in Learning. I'm a curmudgeon of the first order. Yet even I am impressed at the latest, immediately practical research revelations in learning. These are detailed in my latest book, which is on how to learn more effectively using insights from neuroscience and cognitive psychology.

I was shocked to discover counterintuitive findings like this: Sometimes our continuous, focused efforts to solve a problem can inhibit our ability to solve that problem. It's like one of those bamboo finger traps—the harder we pull, the more tightly we trap ourselves. As it turns out, the brain uses two primary networks during its thinking processes. As long as we're focusing on a problem we're using the focused network. This is all well and good—except that this focused network inhibits our ability to access the other, diffuse network. And particularly when we're stuck, a diffuse network perspective may well be what we need to solve a problem or understand a new concept. This, indeed, explains why students can sometimes struggle fruitlessly for hours on a problem, give up, go to sleep, and wake up with the solution magically at hand.

Lobbing back and forth between the focused and diffuse neural networks during the learning process is part of why it is so important to avoid last minute cramming. Much like strengthening our muscles, building the new neural pathways necessary for understanding complex new concepts must be done gradually, day-by-day. Periods of focused attention must alternate with periods of relaxed "diffuse" thinking. (continued)

## **Key concepts**

- Sometimes you must take a break from focused concentration to allow other neural networks to help create understanding.
- Recalling material is one of the best ways for students to grasp complex material—even better than concept mapping or rereading.
- Repeating material over a period of at least several days will help solidify new ideas.
- The Pomodoro technique is a powerful method for getting into the flow and avoiding procrastination and multitasking.
- Test yourself, and your students, at every opportunity if you want to see substantive leaps in learning.

# Learning Lollapalooza

# Repetition Repetition Repetition

This also helps explain why students should use spaced repetition—practicing a little every day to help build and strengthen their new learning structures. The everyday practice needed to develop expertise with a sport, a language, or a musical instrument is also important for subjects such as math and science. It is surprising to realize that we educators give virtually no training to high school or college students regarding procrastination, despite the fact that procrastination is one of the biggest obstacles to day-by-day common-sense approaches to studying. We educators can help. Even something as simple as teaching about the Pomodoro technique—setting a timer for twenty-five minutes and focusing without interruption on some element of a task—can prove helpful for students, not to mention faculty.

Another vitally important new breakthrough in learning is that simply looking away and using recall is far more powerful than any other technique for learning difficult material. Yes, it may be hard to believe, but simple recall is far better than concept

mapping or rereading the material in helping us understand what material really means.

Sure, memorization-related techniques can be abused—so can any technique involved in learning. But research has shown that if we don't have important ideas residing in our minds, in part through memorization, we simply don't fully understand those ideas. (Medical school students must routinely memorize enormous amounts of information to become certified. If you are truly dismissive of memorization as a learning technique, you are being hypocritical if you ask for a board-certified physician.)

Many students suffer from illusions of competence in learning. For example, they will endlessly highlight written words on a page, the motion of their pen providing the illusion that they are moving material into their brain, when nothing of the sort is actually happening. It's a good idea to advice your students to keep their highlighting to a minimum—and make sure they can recall the highlighted material.

## Learning Lollapalooza

Other common illusions of learning (not to mention illusions of teaching!) include the idea that testing, and self-testing, is somehow a waste of time. Actually, testing is one of the most powerful mechanisms we know of to propel understanding into students' brains. As a professor, if you can find a way to intelligently test every single day, research has shown you will find your students make surprising leaps forward in understanding the material.

Several recent papers have highlighted key research breakthroughs involving how we learn. Or you can enjoy an easy distillation of these ideas, and far more, when my book comes out from Penguin in July, 2014. I'm extraordinarily excited about the advances we're going to witness in the learning community. What I've written here is just a foretaste of the discoveries to come. Enjoy!

#### References

- 1. J. D. Karpicke and J. R. Blunt, "Retrieval practice produces more learning than elaborative studying with concept mapping," *Science* 331, no. 6018 (2011).. Karpicke's eloquent response to Mintzes' criticism has to be one of the classic scientific take downs of our era. (J.D. Karpicke and J.R. Blunt, "Response to comment on "Retrieval practice produces more learning than elaborative studying with concept mapping," Science 334, no. 6055 (2011); Joel J Mintzes et al., "Comment on "Retrieval practice produces more learning than elaborative studying with concept mapping"," Science 334, no. 6055 (2011).
- 2. J. D. Karpicke and J. R. Blunt, "Retrieval practice produces more learning than elaborative studying with concept mapping," *Science* 331, no. 6018 (2011).. Karpicke's eloquent response to Mintzes' criticism has to be one of the classic scientific take downs of our era. (J.D. Karpicke and J.R. Blunt, "Response to comment on "Retrieval practice produces more learning than elaborative studying with concept mapping," Science 334, no. 6055 (2011); Joel J Mintzes et al., "Comment on "Retrieval practice produces more learning than elaborative studying with concept mapping"," Science 334, no. 6055 (2011).

## Welcome words from CETL

By Judith Ableser, Ph.D, CETL Director

## Center for Excellence in Teaching and Learning

The mission of CETL at Oakland University is twofold: (1) support faculty efforts to improve teaching by creating learning environments in which our diverse student body achieves maximal learning potential, and (2) promote a culture that values and rewards effective teaching, and respects and supports individual differences among learners.

To achieve those goals, CETL provides weekly workshops, Learning Communities, Faculty Development Institutes; it facilitates coffee and conversations, organizes the Oakland-Windsor Teaching and Learning Conference, and offers grant opportunities related to teaching and learning.

This year CETL is proud to implement numerous new initiatives, including:

#### VIRTUAL TRAINING

CETL now offers training modules, recordings of all our workshops and numerous web resources to support part-time faculty and others who are not able to attend our daytime programs. Visit Virtual Faculty Development to check out these resources.

#### SOCIAL NETWORKING - A PLACE and TIME

In response to feedback from faculty, CETL has arranged for a monthly SOCIAL HOUR at Finnegan's Restaurant located in the Golf Course Club House on the 2nd Thursday of each month. Join your OU colleagues anytime between 4:00-6:00 p.m. on

November 14th, and December 12th for a time to network and mingle. In addition to the 10% discount available for OU faculty and staff, Finnegan's will offer OU a special discount during each Social Hour.

### SCHOLARSHIP of TEACHING and LEARNING (SoTL)

CETL recognizes and values excellence in teaching and learning and encourages faculty to conduct and disseminate research on their own teaching. SoTL is promoted through a Faculty Development Institute, workshops, and Teaching Grants.

#### **WEEKLY TEACHING TIPS**

CETL shares simple strategies and techniques that faculty can easily implement in the classroom.

#### OAKLAND CAMPUS-WIDE LEARNING COMMUNITIES

We are excited to offer opportunities that will foster inter-collaboration, networking and engagement among faculty, instructors, staff and graduate students through Learning Communities.

Together with the Senate Committee on Teaching and Learning, CETL advocates, advances and supports excellence in teaching and learning across the Oakland University Community as the foundations of quality higher education.

Please visit our website at www.oakland.edu/cetl to check us out and register for events or drop in at the 200A-E Suites of Elliott Hall for a chat and a cup of coffee.

## 2012-2013 Teaching Excellence Award Winner - Non-Tenure Track

## My Take on Teaching

For the past ten years, I have been teaching at Oakland University in the Human Resource Development Department and now the Organizational Leadership Department. Before that, I was a corporate executive for 25 years and a part-time faculty member at Wayne State University.

My philosophy of teaching and "learn-do" pedagogy are driven by my desire to help my students succeed in tomorrow's society and, in particular, tomorrow's business and government organizations. I teach them to be leaders and professionals by exposing them to real-world scenarios and requiring them to apply classroom constructs and critical thinking to these situations. I treat them as young professionals and hold them to the high standards I experienced in my professional career with Ford and AT&T.

I teach my courses so that students will be forced to work hard to get good grades. I believe that most (not all, but most) students want to be challenged and well prepared for their future careers. These are the students towards whom I orient my pedagogy and curricula.

All my courses are grounded solidly on theory and research. That is where we start because I want students to understand the foundation upon which the best policies and practices are built. I don't want them to be "mechanics", who just administer existing programs, but critical thinkers, creative problem-solvers and developers of new, effective programs that are based on sound theory and principles. I want them to be in the forefront of change—to lead change.

I continually introduce new innovative instructional practices in my courses. I use a varying mix of lectures, case studies, group exercises, guest speakers, videos, role plays, team projects, presentations, simulations, site visits etc. in my courses.

On a very practical side, I teach long classes that are held once per week. Many of the courses are in the evening and my students are coming into class after working all day. I've been there and I know how tired I was and how hard it was for me to stay focused. I know that I must be compelling or I will lose my students. I must be teaching them something that they really value or they will drift off to another world. I know it is important they respect me and the knowledge and experience I bring to each class. I work hard to keep their interest and constantly challenge them to get better. I want them to see the value of what they are learning and take a special pride in seeing themselves grow and improve. I have my dramatic moments, my funny moments, and my entertaining moments. Whatever I can think of to keep them interested and engaged inside of the classroom, I will do. I push hard for interaction from all the students, not just the "same ones" who always have their hands up.

There are three main courses that I developed and teach almost every term— HRD 323 Negotiation for Personal Success, HRD 304 Lean Principles and Practices in Organizations and my newest course HRD 344 Lean Kaizen in Organizations. All three of these courses are electives within the HRD major as well as General Education courses. (continued)

## My Take on Teaching

In HRD 323 (Negotiation for Personal Success), students are exposed to a significant amount of underlying theory, "real-world" role plays and project-based learning. I designed the curriculum to start out with simple role play negotiations and progressively move up to more and more complex negotiations.

This course stimulates students to learn about themselves under pressure and challenge themselves through actual negotiations in the Negotiation Exercises, Individual Negotiations and the Team Negotiations. I encourage them to take risks. I encourage mistakes and failure, because I want them to try new thinking and new behaviors. For many of the students, this is difficult. I have been able to build trust with these students so they take the risks, and sometimes fail, but persist to "break through" their fears and begin to believe in their ability to negotiate what they target according to their plans.

In the past five years my involvement in the field of Lean has really taken off. It seems like a long time ago that Dr. Joe Schiele of SBA and I co-developed and taught the first Lean undergraduate course (HRD 304 Lean Principles and Practices in Organizations) in winter term 2008.

The curriculum of HRD 304 is designed to introduce students, primarily through experiential project-based learning, to the principles and practices of Lean. This course provides students with the knowledge and skills related to Lean theory, rules, principles, concepts, tools as well as key supporting HRD policies and practices.

2012-2013 Teaching Excellence Award Winner - Non-Tenure Track

I then used the foundation of the HRD 304 curriculum to develop a new Kaizen seminar course. The Kaizen Team of six undergraduate students successfully completed a Lean Workout of the OU Grade Change Process which was sponsored by the then Associate Provost, Dr. Machmut-Jhashi. The Kaizen Team developed a new OU Grade Change Process that has been successfully implemented by the Registrar's Office and is now the "heaviest utilized on-line routable form at Oakland University." Based on this experience, I wrote an article entitled A New Lean Paradigm in Higher Education: A Case Study, which was published in the Quality Assurance in Education Journal in 2011.

The success of this seminar plus a subsequent Honors College course led me to develop another new course—HRD 344 Lean Kaizen in Organizations, which was done in conjunction with my Pawley Lean Fellowship. This new course builds on the "best practices and experiences" of the previous two Kaizen courses. This course provides a logical next step for students who have taken the HRD 304 course as well as students from other schools and majors (POM and ISE) and who want to continue their lean education in a hands-on, problem solving experience.

Both of the Lean courses require that I engage and retain quality Lean organizations for the student teams' Lean Assessments and Lean Workouts. I have been fortunate to form partnerships with some excellent organizations in various industries such as DTE, Faurecia, Lear, Fitzpatrick Manufacturing, Henry Ford Health System, Blue Cross Blue Shield and many others. (continued)

## My Take on Teaching

2012-2013 Teaching Excellence Award Winner - Non-Tenure Track

I started with 2-3 organizations per term in 2008 and now 5-6 organizations per term are needed to accommodate the increased student enrollment. Before each term I generally need to find 2-3 new organizations that are on a lean journey and willing to work with the student teams. This requires contacting a lot of organizations and interviewing presidents and plant managers to see if the organization is a "good fit" and the employees are willing to put the time in with the students.

In summary, I am passionate about my teaching. I care about my students. I want them to succeed both in my courses and in their professional careers and be confident in their new knowledge and skills as they move forward in their life pursuits.

