



# LEADERSHIP

JOURNAL FOR POST-SECONDARY LEADERS VOLUME 22.2 FALL 2016

## TEACHING ON THE EDGE





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*Thank you for leading by example, Dr. Burns.*

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# THE CHAIR ACADEMY

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Managing Editor: Rose Marie Sloan  
rsloan@chairacademy.com

Editor: Richard Strand  
rstrand@chairacademy.com

Copy Editor: Meaghan Wesbrock  
meaghanwesbrock@hotmail.com

Layout/Design: Laura Dvir  
Goldfish Creative  
laura@goldfishcreative.net

Circulation: Vy Bui  
leadershipacademy@chairacademy.com

Media/Social Editor: Dan Cowen  
leadershipacademy@chairacademy.com

Book Editor: Lynda Wallace-Hulecki  
Lynda.jlresearch@gmail.com

### Postmaster

Send Address changes to:  
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## FEATURE EDITORS

**George Andrews**  
Vice President, External Relations  
Northern Alberta Institute of Technology  
Edmonton, Alberta  
gandrews@nait.ca

**Negar Farakish**  
Academic Director/Clinical Assistant Professor  
NYU School of Professional Studies  
Division of Programs in Business  
negar.farakish@nyu.edu

**Lech Krzywonos**  
Principal, Truro Campus  
Nova Scotia Community College  
Truro, Nova Scotia  
lech.krzywonos@nsc.ca

**Bill Lamb**  
Vice President, Academic Affairs  
Kirkwood Community College  
Cedar Rapids, Iowa  
bill.lamb@kirkwood.edu

**Andrew Rezin**  
Chair, Automotive &  
Applied Technologies (Retired)  
Columbus State Community College  
Columbus, Ohio  
drarezin@gmail.com

**Alan T. Seagren**  
Faculty, Professor Emeritus,  
Educational Administration (Retired)  
University of Nebraska  
Lincoln, Nebraska  
aseagren1@unl.edu

**Catherine Songer**  
Division Chair, Natural Science  
Coastal Carolina Community College  
Jacksonville, North Carolina  
songerc@coastalcarolina.edu

**Lynda Wallace-Hulecki**  
Co-Founder & Principal Consultant  
JL Research & Systems Design Ltd.  
Victoria, British Columbia  
Lynda.jlresearch@gmail.com

**Jeffrey D. Yergler**  
Assistant Professor of Management  
and Department Chair  
Undergraduate Management  
Golden Gate University  
Principal, Integer Leadership Consulting  
San Jose, CA  
ilc@integerleadership.com

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## OUR MISSION IS...

...to design and promote world-class training programs and services to advance academic and administrative leadership for post-secondary institutions worldwide in an era of change.

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# TEACHING ON THE EDGE

As a college student (10 years as an undergrad/graduate student) and as a college educator/administrator/executive for over 20 years, I like to think I've learned a thing or two about teaching and learning. Yet as time advances, I realize that the significant demands placed on educators today to truly engage students in the learning process are extraordinary. This realization is just one of the things that inspired this edition of *Leadership* to be dedicated to the topic "Teaching on the Edge."

But what, you might ask, is the title intended to infer? On the "edge" of what, or where?

In 2014 Steven Mintz, Executive Director of the University of Texas System's Institute for Transformational Learning, projected that teaching and learning will differ in five fundamental ways in the 21<sup>st</sup> century from the 20<sup>th</sup>.<sup>1</sup> He surmises that as we sit on the leading "edge" of the 21<sup>st</sup> century, education:

- will be geared toward 100 percent proficiency,
- will rest on the science of learning,
- will be data driven,
- will be personalized, and
- will take advantage of technology in ways that truly enhance the learning experience.<sup>2</sup>

Richard Arum and Josipa Roksa published a controversial book in 2010 suggesting that if we don't make changes soon, we are on the "edge" of losing a generation of students. In *Academically Adrift: Limited Learning on College Campuses*, the authors record the results of research based on a survey of 2,322 traditional college-age students at a range of colleges across the United States. They indicate that an alarming 45% "did not demonstrate any significant improvement in learning during the first two years of college..."<sup>3</sup>

As educators, we take our jobs seriously. We generally understand we have some, if not considerable, responsibility for presenting curricular content in a way that ensures comprehension and invites mastery. And yet, if Arum and Roksa are to be believed, our success rate is hovering around 50%, well below the standard of even our lowest expectation.

What to do? Mark Taylor, one of our highlighted authors in this edition, suggests that while a revolution may be needed, it's a "manageable" revolution. But it requires effort. Absent some amount of intentional effort to embrace and train to a new standard of teaching excellence, we are destined to "teach the way [we] were taught, lecturing on the content to passive students."

Julie Schell, in her piece, invites our attention to the power of "flipping" the classroom itself. The concept sounds simple enough—it involves leveraging a "pedagogical model in which the typical lecture and homework elements of a course are reversed." According to Schell, the flipped classroom has emerged as a viable option, one where students are introduced to a concept, idea, or topic beforehand, and then motivated to deepen their own understanding of the content after the class itself occurs.

In this day of declining budgets and challenging enrollment trends, you may wonder about the cost of innovating our way forward. Not to worry (well, you can, but what good will it really do?)—from an interview with Dr. Carol A. Twigg, President and CEO of the National Center for Academic Transformation, we learn that effective leadership is critical in making the transformation from the way we are, to the way we need to be. Twigg, once named by *Newsweek* as one of the 50 most influential thinkers in the information revolution, advises it's entirely possible that with well-minded and focused leadership we can manage the enterprise (enrollments and budgets) and still improve the overall quality of the educational environment.

As educators, we have a right to be alarmed. But the signs are clear; times have changed. The tips and tools cited by the distinguished authors in this edition of *Leadership* draw our attention to what more must be done to engage students. "Teaching on the Edge" is where we need to be if we truly desire to transform college culture from one of inputs and outputs, to one that truly engages every dimension of the Academy in the teaching and learning process.

1. Mintz, S. (2014, March). Five Ways that 21<sup>st</sup> and 20<sup>th</sup> Century Learning Will Differ. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/blogs/higher-ed-beta/five-ways-21st-and-20th-century-learning-will-differ>
2. Ibid.
3. Arum, R., & Roksa, J. (2011). *Academically Adrift: Limited Learning on College Campuses*. Chicago, IL: University of Chicago Press.

# Voices of Leadership...

## Teaching on the Edge

As this issue of *Leadership* explores Teaching on the Edge, we are focused on innovative ways to engage with the current student populations of post-secondary education. As such, we have reached out to faculty members from within our Academy network to ask them about the valuable lessons they have learned being college educators, how they create significant learning experiences in their classrooms, and the changes they have made that have most impacted student learning. Their responses demonstrate that, ultimately, an interest in the student and a passion for teaching drive the innovation necessary to promote student success.

**Scott Geddis, B.S., M.S., Faculty, Health Professions, Fitness, and Wellness, Phoenix College, Phoenix, AZ, USA**



What are the two most valuable lessons you have learned as a college educator?

During my 40 years as a community college faculty member I have learned many lessons, two that particularly stand out. First, being a great teacher is not unlike being a great manager. I must ensure every student has a clear understanding of what is expected, has access to the materials needed to learn, is encouraged to learn in a way that is best for her/him, connects with the utility or application of the material, and receives quality feedback and encouragement. Second, I have learned to better value the individual within the student. The student we see in the classroom is but a sliver of the person as a whole. It is easy to forget they are complex and more than just students - they are individuals with unique backgrounds, differing life stresses and problems, different support systems, and different motivations to learn. We need not enable a lack of achievement but we need to respect individuals and their uniqueness in the learning environment and often meet them half way.

How do you create “significant learning experiences” in your classroom?

I do not view myself as a teacher but a facilitator of learning. It is not my job to simply teach or deliver information but to create an engaging, active, and safe environment in which student learning is optimized.

Students learn best when they teach each other and engage actively in the learning. I create many formative assessment activities related to the material leading to student discussions, self and peer assessment, and a variety of ways to demonstrate understanding. Turning Point clickers and small personal whiteboards for each student have a significant role in my classroom.

What is the most relevant change you have made to your teaching that impacted student learning?

My first years as a faculty member were spent mimicking instructors, teachers, and professors I had growing up. In other words, I stood in front of a dark room, a bright PowerPoint or slide the only light in the room, and lectured. It did not take long to realize the students were as bored listening to me as I was lecturing and they retained very little information. So, I stopped lecturing. I now flip the learning in my classroom. Students are required to explore the material prior to class and class time is now spent with the lights on in learning activities, group work, and formative assessments. I support student learning by structuring my classroom around active learning instead of standing in front of the room, lecturing to a passive audience.

**Dr. Brady Hammond, Chair, Languages & Humanities Department, Northern Marianas College, Saipan, MP**

What are the two most valuable lessons you have learned as a college educator?

The two most valuable lessons I have learned are to listen and to adapt. In fact, I hesitate to separate the two as they are so firmly enmeshed with one another; adapting requires listening, and listening—good listening—leads to adapting.

How do you create “significant learning experiences” in your classroom?

I aim to create significant learning experiences in my classrooms by focusing on self-reflection. I have found one of the most powerful learning experiences for students has been the realization that they don't know something they know. For instance, if I were to give the students the following two phrases (“the big, red balloon” and “the red, big balloon”), they can all tell me which sounds awkward, but few can ever say why. They know the second is awkward, but they don't know why they know it. I find reevaluating “assumed” knowledge in this way, getting them to focus on the human dimension, as it were, can prompt a drive to learn more about what they know. It can effectively awaken curiosity.

What is the most relevant change you have made to your teaching that impacted student learning?

The most relevant change I have made in my teaching that impacted student learning was to migrate from a student-centered classroom to a student-empowering classroom. While learner-centered classrooms often prioritize contributions of students, I have found that sometimes those contributions become routine; the experiences are not significant. By shifting my own thinking toward empowerment, it has helped ensure that my lesson planning is not just based on facilitating student-led activities, but is based on facilitating student-led activities that are meaningful for the students.



What are the two most valuable lessons you have learned as a college educator?

The two most valuable lessons I have learned as an educator are you always have the capacity to learn and should want to learn. I believe students are more open to educators who realize they do not know everything and are willing to learn new perspectives/ideas. We are all learners, albeit at different levels, in the classroom.

How do you create “significant learning experiences” in your classroom?

I recognize that the average student today is a part of a younger generation. Tapping into that generation through social media, present-day examples/experiences, and out-of-the-box assignments/assessments makes the class intriguing to the student. By making the material relatable to their everyday lives, students begin to embrace the course and it becomes more than just a course they have to take, but a course they want to explore and understand.

What is the most relevant change you have made to your teaching that impacted student learning?

REVAMP! I have adjusted my teaching style to fit different learning styles.



What are the two most valuable lessons you have learned as a college educator?

Easily, the most important lesson I've learned is I learn more from my students than they learn from me. Their insights, struggles, and questions have allowed me to grow as an educator and as a person. The other lesson I've learned is our changing world requires helping students learn to process information rather than learning the information itself. The fast-paced advancement of technology makes massive amounts of information too difficult (and unnecessary) to master. Thus, my teaching has changed to include much more critical thinking and analysis than ever before.

How do you create “significant learning experiences” in your classroom?

In my writing courses, we use current, challenging issues which are of concern and interest to students. Additionally, I encourage them to challenge each other, their communities, and me through their writing. Their research projects generally revolve around current issues which they would like to explore. They look at everything from sand mining to human trafficking, and through their research their growth in knowledge about the world is staggering. The biggest compliment I've ever received is a gift from my student, Mia Lia, who brought me a beautiful piece of raw quartz and a note saying, “Pressure over time

can create beautiful things. Thanks for challenging me!”

What is the most relevant change you have made to your teaching that impacted student learning?

I strive for student-driven, personalized learning in my writing classrooms. When students feel connected to and invested in a topic, they learn more.

What are the two most valuable lessons you have learned as a college educator?

First, the student demographic is constantly changing with each intake of students, ranging in age, professional and personal experience, as well as readiness for the academic rigor and culture of post-secondary education. While our nursing program requires students to rise to the standards of practice set forth by the nursing profession, it is important to assess and meet students where they are personally, professionally, and academically upon entry to their first semester of a 4-year, cohort-based program. Second, students are commonly navigating family, employment, and financial commitments in tandem with their academics. Implementing support measures individualized to students' needs is key to fostering resilience to manage stressors and set them up for success.

How do you create “significant learning experiences” in your classroom?

The classroom environment has a highly interactive team focus encouraging creativity with students working in teams, utilizing discussion forums, debates, and group presentations as the medium for learning. Teams have the first half hour of class devoted to their learning community to present an issue of relevance to their learning. I have an open door policy and strive to meet each student in person at least once to learn how they are doing and what support measures they may need to benefit their learning experience.

What is the most relevant change you have made to your teaching that impacted student learning?

I complete an exercise the first day of class to assist students in exploring their individual personal styles and the implications this element can have on their success. I have included Emotional Intelligence activities into the weekly curriculum relevant to students' academic and personal growth, recognizing that self-awareness equips students with the tools to enhance their resilience and optimize their growth.



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# LEADERSHIP

## LEGENDS AND LESSONS with Clifton Taulbert



A discussion between *Leadership* Managing Editor Rose Marie Sloan and Clifton L. Taulbert, global speaker, author, entrepreneur, and businessman

### RECOGNIZING A LEADERSHIP LEGEND

Clifton L. Taulbert, perhaps best known throughout the post-secondary landscape as the author of *Eight Habits of the Heart*, began learning his own leadership lessons as a child in the Mississippi Delta. Throughout his life his lessons have been many and varied but they were all rooted in the value of community. The connection between individuals, the value inherent in each person, and the recognition that “we are better together” serve as overarching themes in his writing, speaking, and business endeavors.

Here, he shares with us some of his most important and lasting lessons, framed in the present climate of post-secondary education, technology, community, and leadership.

**The Chair Academy is celebrating its 25th Anniversary. Describe your experiences with the Academy.**

Over the years, I have had the opportunity to see dedication and commitment up close when working with the Academy leadership and those who teach and counsel students. Though over a hundred years have passed since the founding of community colleges, the original intent has not been lost. I have found the Academy still focused on reaching out and providing access and making the membership aware of that value. Also, the Academy has not been fearful of advancing technology, but has embraced the future while maintaining the best values of the past.

**You are known for sharing poignant memories about your upbringing and the importance of “front porch wisdom.” Share with us one of your most memorable stories and the lessons you learned.**

I learned from my great-grandfather that even though I only had 24 hours in my day, I still had time to include others. He taught me that “others” matter. It was so evident when riding to the city to get items not available in our town. We had a time limit, but Poppa would always pick up Mr. Louis Fields, who wanted a ride. I didn’t want to give up my position in the front seat but Poppa just nodded his head to the back seat and Mr. Fields took my seat while I quietly sat in the back, reluctantly becoming part of a community being built. I was too young to understand the value of those lessons at the time, but early



on I saw what community looked like. I saw the value of being unselfish with my time. I have never forgotten that. Even today, I enjoy making room for others. I saw the joy it brought Poppa and Mr. Fields. Now it’s my time to do likewise.

**How would you describe your leadership style, and how has it evolved?**

I start from the premise that others matter and, as I experienced, I intentionally set an open table for input and questions so that the best ideas can flow. I always remind my team of the vision and the mission that drive us. Over the years, I have come to understand that being in charge does not mean you have all the answers or that others have no answers. I remember some leadership that didn’t bode well with me and I became determined to not repeat what I had experienced. I am very thoughtful regarding the feelings of others. I have learned that we are better together.

## LEADERSHIP LEGENDS AND LESSONS



### Why is “building community” in our post-secondary organizations so important?

Building community is an ongoing process, not a project. And it is the daily process of living out multiple micro-dosages of unselfishness that creates the culture of inclusion. Community, when highlighted, creates an atmosphere that is robust and engaging and students and faculty are more apt to respect and embrace each other. Secondly, technology has become so prevalent that we could easily overlook one of our greatest assets—each other. And this is so important for first-year, first-generation students who are adults, potentially experiencing fear and apprehension in a campus setting. If they run into community on campus, their perspective can change for the better. If this basic concept shows up in the post-secondary world, it will have a greater chance of being realized within our workplaces. People still matter and building community is the one process in which we can all take part. Community provides for cross-pollination of ideas and making new discoveries.

### In today’s global environment, how do we keep people engaged and motivated?

In today’s fast-paced culture, no matter how successful one is becoming, the need for good relationships still exist. One is a lonely number. And success alone is not the most worthy companion. Personally, we must be intentional to not throw out the basic life lessons of people helping people. We must find time to break bread together—tell stories that matter and in so doing, learn how cross-pollinated we have become and at the same time discover the possibilities that still exist.

### Education is a global enterprise. With that in mind, what would you list as the primary struggles and/or common issues for post-secondary leaders?

Crossing culture divides can be a challenge, but it doesn’t have to be a STOP SIGN. I remember growing up and, looking back now, I can easily see why the “porch people” were so important and accomplished so much in spite of the challenges they faced in their lives. They saw their future through our lengthening steps. I feel that post-secondary leaders must do and see likewise. Our global reality begs for the soaring of our imagination—going beyond what we have always done and expected, to believing that the impossible is possible. Global education is a call to lead, think, and respond beyond the box. Financing the new era of learning can be problematic, but it is not something that cannot be overcome. I see the added value of industry and education coming along as partners to help ease the burden of our global requirements, and creating walking bridges together.

### As I work with and coach leaders worldwide, I continually hear about the amount of “change” that is occurring within their organizations and how hard it is. Provide some strategies for dealing with change, as well as insights for positive change.

Change is inevitable and it always has been. Only now the rate of change is far faster than we have ever experienced. Leadership can no longer focus on just “thinking outside the box” but must focus on *getting out of the box* so that their leadership is reflective of what can be, rather than simply



dealing with what is. This is a perfect time to bring together “experience” and “exuberance” (multiple generations working together) to create a more dynamic environment where change becomes an opportunity to turn the lights on rather than a reason to bemoan the reality that things aren’t what they use to be. We take the car for granted now, but at one time, the horse was all we knew and, for all we knew, nothing better would come along. Change is that light bulb of thought that keeps that better thing coming along; it’s disruptive, but most likely will prove to be beneficial.

**For all NEW leaders, what would you suggest as tips and tools to contribute to their success?**

I would urge new leaders to first and foremost consider their new positions as incredible places to build their human relationship portfolio. Be prepared to learn from those you lead. Embrace the opportunity to participate not just as a leader but as a fellow human being. Be quick to share information so that others can grow and excel in your presence. Listen. Establish a standard of respect, affirmation, and inclusion for all those you encounter. Build community—be willing to live out the principles of unselfishness you want others to display. Create time and space where ideas from your people can be shared without thought of being criticized. Always remember, “We are better together.”

***In your words, “We, as leaders, need to strategically inventory our toolboxes to determine how best to use them. Then, we need to determine the additional tools needed to address the challenges facing higher education.” What are***

**some strategies for doing this, and how often should we take inventory?**

This should be an ongoing process—driven by the vision, the mission, the changes occurring, and plans you envision. The move forward will always require something new and different. Historical success is just that. Build upon it and be ready to add to or take away when needed. Foster continuous learning, not just from a classroom perspective, but from your peers and what is going on in the outside world. Create a “What is working” conversation with peers from your industry as well as beyond your industry. It is also very important to choose the mindset that is future-focused, not held captive by the past. I often suggest that educational leaders borrow from those we define as entrepreneurs—principles and actions that move them beyond the status quo to the creative and innovative. Entrepreneurs do not own this method of thinking and responding to life. It’s important to listen to others and when your light bulb comes on...write it down for further study. Higher education will never be what it once was. The “change” train has left the station. And you must embrace the leadership tools needed to operate within these new environments.

**Your message for many leaders includes “the value of leading with a growth mindset.” Help us understand this principle by providing an example.**

Without the growth mindset, as a leader, you may find yourself comfortable with the success you have had in the past. Such thinking can blind you to what is really needed and what is not working. Remember, being comfortable does not mean you

## LEADERSHIP LEGENDS AND LESSONS



are being successful. The “fixed mindset” boxes you in and oftentimes turns off the light and locks the door - you just keep running into yourself - whereas the “growth mindset” will ready you to tackle the challenges and to tag along with others who are doing likewise. With this growth mindset you recognize that your effort is of value and continuing to try is what you do. You are not one to give up when your first plan does not work. Just remember that everyone thought SOUTHWEST AIRLINES was a joke except those who had

the vision. Disappointment hung around them for years, but giving up was not an option. They took every “no” as a challenge to create their own “yes” and in so doing, we have all been better served. Herb Kelleher and his team brought a growth mindset to their enterprise. This is just as valuable in the post-secondary field of education. Leaders, I encourage you to embrace such a mindset and live it out in front of your team. Your team looks up. What do you want them to see?

### Reflecting on your experiences, share with us some of the “leader lessons” you learned along the way.

I have learned that it is perfectly alright to ask others for help.

I have learned that community building is one of the greatest attributes a leader can bring to the table-embracing and understanding that others matter.

Hard work is not to be shunned. Easy is not guaranteed.

Fear can show up, but we don't have to give fear a permanent place to live.

I have learned to appreciate the success of others and not to be blindly jealous.

I know it's important to personally resolve to succeed. Your resolve spills over on others.

I fully embrace building a solid relationship bridge internally and externally.

I have learned that a “growth mindset” will keep you from being swallowed up by potential failure.

I have learned to win where I currently stand and not to hold off to be my better self at the new place.

Wherever I am, my best is deserved.

# Flipping learning by design:

How to use cognitive science research to design flipped classrooms that help people learn best

Dr. Julie Schell

**design**, n. An intended course for travel. That which is aimed at; an end in view; an ultimate goal or purpose. A plan conceived in the mind, and related senses (*Oxford English Dictionary*, 2016).

**How can we help students learn best?** This is a question educators have pondered since antiquity. At its core, this is a question of design. To arrive at the destination of learning at its best, an intended course of travel must be charted. What should that course look like? Where should it take students? The original pedagogues Socrates (469-399 B.C.), Plato (427-347 B.C.), and Aristotle (384-322 B.C.) had specific routes for arriving at knowledge acquisition. As did later century philosophers such as Descartes (1596-1650) and Locke (1632-1704). For example, Socrates sculled paths to learning through relentless questioning. Descartes used doubt to steer students toward knowing and truth. For more than 2,000 years, countless methods, approaches, theories, and other designs for maximizing formal learning have surfaced. Yet, despite millennia of effort from the most influential thinkers in history, students and teachers in higher education still face vast learning chasms and the questions endure. How can we help students learn best? What does learning at its best even look like? How can we design our courses for the best possible learning experiences?

**Of late, flipped classrooms have emerged as an answer to these questions for many educators.**

The popularity of flipping spans institutional types, grade levels, disciplines, and continents. Popularized by high school chemistry teachers Jon Bergmann and Aaron Sams (Schell & Mazur, 2015), higher education now embraces the method. For example, in 2016, universities such as Columbia University, Cornell University, and Indiana University-Bloomington hosted flipped learning symposia, institutes, and workshops. Other universities including Carnegie Mellon University, Duke University, University of Michigan, University of Texas, University of Washington, and Vanderbilt dedicate space on their webpages to promote flipping among faculty. And institutions and national funding agencies such as the National Science Foundation provide grants to support or study flipping (Plotinkoff, 2013).

The attention higher education is paying to a single pedagogical approach is unprecedented. Of course, innovative pedagogy such as Peer Instruction (Mazur, 1997), the case study method, and project-based learning have made their way into many classrooms, but such efforts are generally within specific departments and disciplines rather than campus-wide. There has not been a time in recent history where there has been a more serious, demonstrative effort to augment our higher education classrooms with student-centered pedagogical innovation.

Scholarship has started to proliferate around the concept of flipping, with high amplification since 2010 as illustrated in Figure 1. With this rapidly scaling attention, critics of flipped learning are beginning to voice concern about hype, false claims of novelty, and effectiveness of the method. Schell and Mazur (2015) provide an outline of such critiques. The most serious appraisals are those that point to the lack of concrete evidence that flipped classrooms contribute to skill development or better learning in undergraduate education over other active learning methods (Jensen, Kummer, & Godoy, 2015; O'Flaherty & Phillips, 2015; Schneider, Wallace, Blikstein, & Pea, 2013; Yong, Levy, & Lape, 2015).

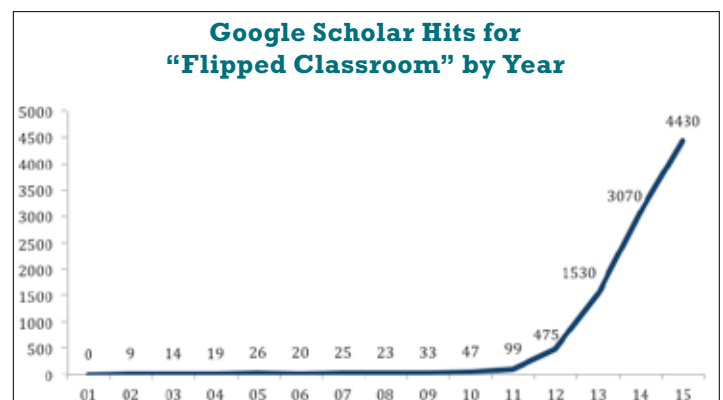


Figure 1. Line graphic of Google scholar hits for the term "flipped classroom" by year from 2001-2015.

Figure 2

Julie Schell's flipped classroom during a collaborative exam.



Although the validity of these critiques is not in dispute, many such concerns are likely misplaced on the ill-defined concept of flipped classrooms themselves instead of the instructional design of a particular flipped classroom. Indeed, the attention to flipped classrooms, both positive and critical, has unfolded despite a notable lack of both conceptual and definitional clarity in scholarship and the popular media (O'Flaherty & Phillips, 2015; Schell & Mazur, 2015). In order to make the most informed decisions and the best investments, institutions and individual faculty need accurate references that define what flipped classrooms are and, much more importantly, specific designs that will ensure students learn best in flipped spaces.

### Definitions of Flipped Classrooms Vary Widely

Opening the doors to a college classroom in present day will likely reveal an instructor standing behind a podium or in front of a board delivering a lecture. Often, the instructor's back will be turned, with the teacher facing away from the students. For most students and many faculty, this traditional setup is truly what they believe learning at its best looks like. But behind the doors to a flipped classroom, something very different is at work. For example, a visit to the Technology and Innovation in Higher Education flipped class at The University of Texas at Austin on any given day would reveal tables of students independently working on an exam, then loudly and energetically collaborating on that same exam in teams; they might even be smiling despite taking a summative assessment. Onlookers would witness the instructor intently listening at each table, taking notes, and monitoring student progress. Observers would also see the instructor debating answers, facilitating a discussion, or working on a hands-on project together and always with, rather than away from, the students.

This is not the image that comes to everyone's minds when they think of the term "flipped classroom." Many scholars define flipped classrooms, sometimes also referred to as inverted classrooms, as an approach whereby students watch video lectures out of class and do homework in class. For example, Pierce and Fox (2012) explain, "in the flipped class model what used to be class work (namely, the instructor-led lecture and student note taking) is done prior to class, while what used to be homework (typically, assigned problems) is done in the scheduled class" (p. 1). Strayer (2012) positions flipped

classrooms within the larger context of blended learning, stating "what makes the concept of the inverted classroom as presented in this article novel is the regular and systematic use of interactive technologies in the learning process" (p. 172). Bergmann and Sams (2012) too have a different definition, positioning the method more conceptually: "Flipping the classroom is more about a mindset: redirecting attention away from the teacher and putting attention on the learner and the learning" (p. 12). Lage, Platt, and Treglia (2000), whom researchers credit with publishing the first article on the "inverted classroom," write that access to multimedia and other learning technologies "means that events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa ... For example, the use of the World Wide Web and multimedia computers (and/or VCRs) enables students to view lectures either in computer labs or at home, whereas homework assignments can be done in class, in groups" (Lage et al., p. 32).

For the sake of precision, a flipped classroom should be considered a framework for learning rather than a specific instructional design. Just as a home has a basic frame – windows, a front door, a back door, a roof – so too does a flipped classroom. One way to conceptualize the basic frame for a flipped class is to imagine three windows to learning that open *before*, *during*, and *after* class (Schell, 2013; Walker, 2013). Just as unique designs constitute the inside frame of a home, the same holds true for a flipped classroom. It is not the flipped classroom that should be at issue when we either support them or critique them. The unit of analysis should be the design, or what will happen once students step through the before, during, and after windows and into the learning spaces faculty build for them. These spaces are critical to helping people learn and as such must be carefully designed if higher education wants to arrive at that ultimate destination of best learning for all students.

For example, in Schneider et al. (2013), which some have used as a critique of flipped classrooms (Plotinkoff, 2013), the authors report that students learn a specific complex topic, such as the ways neural pathways work in the brains, better through hands-on exploration of that topic as their "first exposure" versus reading a text or studying traditional representations.

This finding does not mean the flipped classroom does not work. Rather, for this particular complex subject, best learning means designing a specific, guided opportunity for students to build prior knowledge structures *before* engaging in more traditional texts or problems.

The best way to understand a flipped classroom is to think of it in comparison to a traditional class. Diffusion of innovation theory is a topic of study in the Technology and Innovation in Higher Education class at The University of Texas at Austin. If the instructor were to teach this in a traditional manner, she would provide a lecture on the theory during a class meeting and then ask students to read and write about the theory after class. The signature feature of a flipped classroom is that it prepares students for future learning by priming or mining some initial pathways to deep, conceptual understanding (Lang, 2016). These paths generally, but not always, involve providing students with first exposure to subject matter *before* they come to class, rather than during class. In the Technology and Innovation classroom, students write about what they understand about innovation or diffusion of innovations before completing a reading or even listening to the faculty lecture on the method. In a chapter on Flipped Classrooms in Chemistry (Schell & Mazur, 2015), the authors offered a 3-part definition of a flipped classroom informed by Walker (2013) as a framework whereby instructors:

1. provide students with an opportunity to gain first exposure to a concept, idea, or topic before class;
2. move students from first exposure to the more demanding tasks of application and transfer with the support of the subject matter expert and peers during class; and
3. motivate students to continue to deepen their learning with practice after class.

Within this framework, the most important decision a faculty member can make is how to design the intended course of travel to get students to pay attention to the right things in their quest for learning. It turns out that cognitive scientists have a treasure trove of firmly established, evidence-based learning strategies that can and should be infused in the design of flipped classrooms. These design ideas, however, have yet to make it to the majority of classrooms in higher education, flipped or otherwise. What follows explains the most robust yet underutilized designs.

### **How to Design a Flipped Classroom Using Research on How Students Learn Best**

#### **RETRIEVAL PRACTICE**

The design of the Technology and Innovation in Higher Education flipped classroom is based on a theoretical framework of extensive empirical research in cognitive science (Butler, Godbole, & Marsh, 2013; Karpicke & Blunt, 2011; Karpicke & Zaromb, 2010; Lang, 2016; Nunes & Karpicke, 2015; Roediger & Butler, 2011; Roediger & Karpicke, 2006a, 2006b). The framework is undergirded by the concept of the retrieval or testing effect. Based on decades of research, cognitive scientists have come to consensus that retrieval, or the “act of calling information to mind rather than rereading it or hearing it,” substantially improves the ability to retain that information and adaptably use it in

future situations (Roediger & Butler, 2011, p. 20). The best flipped classroom designs include incorporating retrieval practice into teaching and students’ learning. Retrieval practice means simply engaging in acts of retrieval. It includes a huge variety of activities that involve making an effort to recall content, skills, ideas, theories, facts, or understandings that we have learned. According to leading retrieval practice researcher Andrew Butler (2016), there are many ways to engage in retrieval practice, such as using flashcards, playing a vocabulary match game, setting lecture notes aside and trying to recall important points from memory, or answering multiple-choice quiz questions with relying on references.

To provide a simple demonstration of retrieval practice, answer this question: What did you have for breakfast yesterday? If you attempted to recall that information, you just engaged in an act of retrieval. Retrieval practice can be used as a learning or study strategy for students attempting to learn basic and complex materials (Karpicke & Aue, 2015). The strategy contrasts with the more common study approach of review or rehearsal. For example, if you had your breakfast written down in a food-tracking application in your phone, looked it up without actively trying to recall it from memory, and then reported it back, that would not be retrieval. Instead, that would be reviewing and repeating what you have reviewed. Rehearsal refers to a process whereby students learn or study new content by reviewing, rehearsing, or repeating it without the effort of “pulling it” from memory (Goldstein, 2011). According to memory researchers, retrieval practice, while much less popular, is a much more effective process for learning (Lang, 2016): “Each act of retrieval changes one’s knowledge, improving the ability to retrieve knowledge again in the future” (Nunes & Karpicke, 2015, p. 2).

Students and faculty are largely unaware of the power of retrieval compared to more traditional study approaches (Karpicke et al., 2011; Lang, 2016). Yet, knowledge of the retrieval effect and its strength as a learning strategy is not new. There are more than 100 years of research and scholarship supporting retrieval practice as a best-in-class learning method when the end goal is long-term retention and transfer of knowledge (Karpicke & Roediger, 2006b; Roediger & Butler, 2011). According to Karpicke & Roediger (2006b), both Frances Bacon (1620) and William James (1890) wrote about self-testing to improve learning. Unfortunately, most students and educators only see testing as a method for assessing or measuring what students know (Karpicke & Roediger, 2006b). Even with formative assessment, educators typically only engage in knowledge checks to determine what to do next for students, not to actually facilitate learning or retention of content. With retrieval practice, the best effects will only result if retrieval efforts or testing is used deliberately as a tool for enhancing learning, rather than simply measuring it (Karpicke & Roediger, 2006b; Lang, 2016).

Because of the simplicity of the process, some may question whether retrieval is only appropriate for rudimentary materials. Karpicke and Aue (2015), however, demonstrated through several experiments that “retrieval practice remains an effective way to improve meaningful learning of complex materials” in addition to more basic content (p. 317). Moreover, retrieval promotes other meaningful learning activities (Ausubel, 2000),

# “What should you vary? In addition to engaging students in retrieval with feedback, vary the complexity of the questions and the contexts within which you require students to apply the knowledge.”

including facilitating transfer of learning to new contexts and success on performance tasks that require inferential rather than rote responses (Butler, 2010).

## **Best Practice for Flipping Your Classroom with Retrieval Practice**

There are as many ways to infuse retrieval practice into a flipped classroom as there are definitions of flipping. The only non-negotiable design element is that there must be opportunities for students to test themselves; that is, to retrieve or pull content from memory and eventually to do that successfully (Roediger & Butler, 2011). Lang (2016) emphasizes that engaging students in retrieval equates to giving them a test, where testing “simply means forcing learners to recall learned information, concepts, or skills from their memory” (p. 22). Again, this type of testing should be considered as a separate activity and in addition to formal or summative testing or quizzing (Butler, 2016).

## **Should feedback accompany retrieval practice?**

To help students remember and transfer what they learn to new contexts, incorporating retrieval practice without a mechanism for feedback is a preferable learning strategy to review or rehearsal (Roediger & Butler, 2011). Importantly, however, retrieval practice that includes some instructional feedback can further enhance performance on subsequent tests of memory and inference (Roediger & Butler, 2011; Butler et al., 2013). What kind of feedback is best? Research assessing the benefits of feedback demonstrates that immediate (e.g. feedback on correctness immediately after students respond to a retrieval task) and delayed feedback (e.g. feedback after a time delay) are both effective, but delayed feedback may “boost” final performance even further (Roediger & Butler, 2011, p. 23). In addition, Butler, Godbole, and Marsh (2013) demonstrated that feedback on correctness with explanations of the correct answer “produced superior performance” on complex questions that required students to make inferences (p. 290). Designing mechanisms for feedback will ensure that students arrive successfully at the learning destinations you have set out for them.

## **How much retrieval is enough?**

Studies suggest that engaging students in just one retrieval task can have an effect on performance (Roediger & Butler, 2011). Repeated retrieval, however, appears to be even more powerful (Roediger & Butler, 2011). Repeated retrieval may include answering the same question and receiving the same feedback several times, such as studying a single flashcard over and over again and quizzing yourself on the answer before flipping it over. That said, varying the context and questions that students answer about a content area proves more effective (Butler, 2016; Butler, Cantor, Raley, & Marsh, 2016; Lang, 2016; Roediger & Butler, 2011).

What should you vary? In addition to engaging students in basic retrieval with feedback, vary the complexity of the questions and the contexts within which you require students to apply their knowledge (Butler et al., 2016). In the Technology and Innovation class at The University of Texas at Austin, the curriculum varies with complexity in retrieval questions, retrieval tasks (free writes, in-class quizzes, out-of-class quizzes, flash cards, and so on), and the contexts of questions. Another tactic could be using interleaving to vary the order and time spent on learning sets of content. “Interleaving refers to the practice of spending some time learning one thing and then pausing to concentrate on learning a second thing before having quite mastered that first thing, and then returning to the first thing, and then moving onto a third thing, and then returning to the second thing, and so forth” (Lang, 2016, p. 68). Blocked practice is what students typically do and is the opposite of interleaving. In Technology and Innovation, blocked practice might look like students studying and mastering each individual adopter category in the diffusion of innovation theory one at a time before moving on to the next category. Instead, the course interleaves retrieval practice as follows: the instructor designs opportunities for students to learn a little about each category and then return to study each in more depth. In addition, on an in-class quiz about new material and theories, the instructor mixes in questions on adopter categories from previous learning activities.

## **How should retrieval events be organized?**

The literature suggests that spacing is the most effective way to organize a retrieval practice design. Spacing refers to spreading out retrieval practice over time, in multiple sessions, rather than in just one session. This type of learning contrasts with massed practice where students rehearse information over and over again as an attempt to store it in memory (Brown, Roediger, & McDaniel, 2014). The problem with this kind of practice is that it leads students to confuse familiarity with content, or the ability to easily access knowing from memory, with subject-matter understanding. Spacing promotes deeper learning of content because it always allows time for forgetting, making the retrieval of that information more effortful (Brown et al., 2014). This effortful cognitive activity is an underlying mechanism for why retrieval practice with spacing is superior to most of the massed strategies so common to students’ study habits (Brown et al., 2014).

Interleaving is a type of spaced practice. Mixing content encourages students to spread out the concepts they are studying, rather than blocking or massing it, resulting in spaces of time between study activities. Recalling information after a time lapse requires more effortful retrieval than massing study (Brown et al., 2014; Lang, 2016). A student who is using massed practice might prepare for an exam for three hours the night



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before class meets; a student who has adopted spacing as a learning strategy would study the same content for the same amount of time, but spread it over three days (Roediger & Butler, 2011).

Spaced practice takes more effort than massed practice. As such, at first students may find learning with spaced retrieval more difficult than the more routine massed rehearsal approach. Learners can and do misinterpret content mastery with familiarity with material and how easy it feels to learn something. Such misinterpretations often lead learners to continue using the more popular yet less powerful massed practice strategies (Brown et al., 2014). Based on cognitive science, when compared to the wide variety of learning strategies, the benefits of spaced retrieval practice are unmatched (Brown et al., 2014; Lang, 2016).

So, when thinking about investing in or designing flipped classrooms, consider placing an emphasis on enterprises that incorporate established theories about how students learn best, such as retrieval-enhanced learning. Make sure to incorporate mechanisms for feedback, vary the way students practice, and build in spaced approaches to ensure students remember and retain what they learn and can engage in higher-level cognitive tasks like transfer in the future. That is, ensure flipped classroom designs are aligned with how students learn best.

## A word of caution

Adopting retrieval practice designs is difficult for students and faculty because it goes against the workflow students have been using with success for most of their lives. Even students in Technology and Innovation, who studied the established benefits of retrieval practice literature, did not fully stop the strategy and studied using review and rehearsal. Some faculty are hesitant to integrate robust retrieval designs in their classrooms because of general concerns around testing and the impact it may have on end-of-course evaluations (Roediger & Butler, 2011). In Technology and Innovation, and in the literature, students state that the retrieval designs force them to keep up with the content in ways they did not do in other courses and the frequent testing did not negatively impact this author's evaluations. If a faculty member decides to integrate retrieval practice in a flipped classroom, it is important to explain to students why the instructor is making this choice, the differences between retrieval and other kinds of learning strategies, quizzing and assessment, and the benefits of changing one's workflow to practice through tests rather than reading, re-reading, and highlighting.

## Conclusion

For decades, scientists of learning have documented that incorporating retrieval practice into our educational craft is an evidence-based way to help students learn best. It should become as much of an “educational food” as books, lectures, articles, research papers, laboratories, and problem sets (Dewey, 1938). Yet, the retrieval effect is surprisingly absent from the design of higher education classrooms, flipped or otherwise.

Incorporating retrieval practice into a flipped classroom so that it is present when students open and step through the before, during, and after windows is one of the most powerful things faculty members can do to ensure their students learn best. As higher education continues to invest in flipped classrooms, focusing on design is key. As faculty create learning paths for students and institutions invest in innovation, they must ensure transformation and change *by design*. In doing so, the higher education community may finally be able to stop the 2,000-year-old cycle of posing the perpetual yet serious question: How do we help students learn best?

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**Julie Schell** is Director of OnRamps and Strategic Initiatives at The University of Texas at Austin's (UT-Austin) Office of Strategy and Policy where she designs and leads strategic education innovation initiatives. She is an expert in pedagogical innovation, including flipped classrooms and Peer Instruction. In 2014, she was identified by Teachers College, Columbia University as an Early Riser in Higher Education for her contributions to the field. She is also a Clinical Assistant Professor at UT-Austin's top-ranked College of Education, where she teaches two graduate courses: Technology and Innovation in Higher Education and Problems of College Teaching. With UT, she currently holds a dual appointment as an associate in the Mazur Group at the School of Engineering and Applied Sciences at Harvard University, where she generates and tests ideas for scaling innovative teaching methods. She holds a doctorate in Higher and Postsecondary Education from Teachers College, Columbia University and an M.S. in Counseling and Educational Psychology.

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# On Improving Learning and Reducing Cost



**DR. CAROL A. TWIGG** is President and CEO of the National Center for Academic Transformation (NCAT). NCAT provides leadership to colleges and universities in how effective use of information technology can improve student learning while reducing instructional costs. A widely published writer and a sought-after speaker, she is an authority on how information technology can be used to transform teaching and learning. In 1995, *Newsweek* named her one of the 50 most influential thinkers in the information revolution, and in 2010, she was named one of the 100 Most Creative People in Business by *Fast Company* magazine. She is the recipient of the prestigious McGraw Prize in Education (2003), the Virginia B. Smith Innovative Leadership Award (2007), and the O'Banion Prize for Excellence in Education (2009). Dr. Twigg received a B.A. from the College of William and Mary and a Ph.D. in English Literature from the State University of New York at Buffalo.

Does your institution have to increase enrollment and reduce cost without eroding quality? If so, you are not alone. As a higher education enrollment management consultant, this is a common challenge I hear time and again from campus leaders across North America and beyond. Therefore, in reading the November/December 2015 *Change* article by Dr. Carol Twigg, “Improving Learning and Reducing Costs: Fifteen Years of Course Redesign”, I was keenly interested to learn of the demonstrable success of a course redesign methodology developed through the work of the National Center for Academic Transformation. According to Twigg, NCAT’s President and CEO, the course redesign methodology has had proven success across hundreds of institutions in increasing learning outcomes, improving completion rates, and reducing instructional costs. Yet, there has been only limited adoption throughout higher education. In addressing the question of why this is the case, Twigg commented in the article that “[S]caling course redesign must occur at the campus level. Doing so requires active and thoughtful leadership” (Twigg, 2015).

Implicit in her comment (at least for me) was that effective leadership is both a critical success factor and a common deficit in academic transformation. Intrigued to learn more about the leadership dilemma, I contacted Dr. Twigg for an informal telephone conversation to explore her perspectives in more

depth. Herein are select excerpts from our conversation to three general areas of inquiry that shaped our discussion. Dr. Twigg’s comments were grounded in her extensive experience in working in partnership with hundreds of colleges and universities in advancing course redesign efforts using technology to improve student learning while reducing cost. In this regard, her work on course redesign has involved the process of redesigning whole courses—rather than individual classes or sections—as part of a campus-wide commitment to advancing transformative change in teaching and learning.

1. Many institutions are challenged with building capacity to transform tradition-bound approaches in instructional practices, curricular design, and student learning supports. What must campus leaders do to build the fundamental capacity conditions for advancing transformative change?

That is a complicated question. One thing NCAT has done in the past couple of years is create a series of how-to guides that we informally call “cookbooks”. We are doing this to create resources in course redesign. The most recent guide is called “How to Create a Campus-wide Course Redesign Program Using NCAT’s Methodology” (NCAT, 2015). The guidebook answers this question in detail.

Essentially, if an institution wants to use course redesign as a vehicle for serious campus change, then an organized program must be created that involves a campus-wide call for action, definite goals, timelines, accountability systems, as well as adequate resources to support success in implementation. This is what the guidebook is all about - how to create such a program.

Many academic leaders do not take a position and lead this kind of change initiative on campus. By leading, I mean taking a stand on what is fundamentally important for the institution, explaining to faculty why it is important, helping them organize, and supporting them in carrying out that kind of vision. It is like the distinction between leadership and management. It is not just about managing day-to-day activities and putting out fires. Rather, it is about creating a shared vision for academic innovation with a focus on both student learning and reduction in instructional costs. To me, the latter is likely the most important issue facing higher education today, and the one most campuses are least willing to deal with. For this reason, leadership has to come from the top of the organization - the President and/or Chief Academic Officer.

Even though many academic leaders may be willing to take on the issues of quality and cost, they may not know how to do it. This is one of the reasons why we have put our emphasis over the last 15 years on creating a series of models showing how it can be done and what it means in practice. So, while leadership is important, knowledge and how-to knowledge is equally important.

Institutions face many similar problems, but also have problems that are unique to their situational context. To illustrate, if an institution is facing budget cuts, the role of the academic leader is to say, "How are we going to deal with the budget cuts?" In this regard, I am not referring to just taking the path of least resistance through across-the-board budget reductions. Rather, the role of the leader is to seek solutions for changing the way instruction is offered to absorb those budget cuts, and for how quality can be maintained and even improved.

Other institutions may face greater demand for their services than the resources available to meet them. This is particularly true for community colleges, where student demand often outstrips supply. Then the question becomes, how can we offer more places and courses to students on the same resource base? By doing so, the cost of instruction is reduced. Therefore, it is really up to the leadership to frame these questions within the context of the specific challenges the institution is facing, and then help faculty and staff to understand that there are ways to solve these problems. It is not about change for the sake of change. Change in itself is neither good nor bad. It must be specific to an issue at hand to be effective.

2. Even innovative institutions frequently fall back on a "one-size-fits-all" approach to instructional practices, rather than addressing the individual needs of the diverse populations of learners they serve. What effective strategies should institutions employ to (a) develop a deep understanding of the educational needs of the students they serve, and (b) foster a culture of innovation and change based on what is learned?

This too is a big question. NCAT's successful redesign projects demonstrate conclusively that the combination of learner-centered principles and the appropriate use of information technology are primary factors in increasing student success and reducing instructional cost. Clearly, assessment plays a vital role in all this; assessment of students when they enter the institution, when they begin a particular course in terms of knowledge levels they bring into the course, and as they progress through the course. Assessment should be kept as simple as possible and be embedded to the extent possible within the natural processes of the institution. Most institutions do some kind of quantitative literacy and numeracy assessment upon entry, but often do not track students to find out if the assessment instrument(s) effectively place students in the right courses and if students move through courses as they think they should.





“Even though many academic leaders may be willing to take on the issues of quality and cost, they may not know how to do it. This is one of the reasons why we have put our emphasis over the last 15 years on creating a series of models showing how it can be done and what it means in practice. So, while leadership is important, knowledge and how-to knowledge is equally important.”

Similarly, if different forms of instructional delivery are being experimented with, then the institution should be measuring what works and under what circumstances. Do lectures, in fact, help students learn, or are they an impediment to learning? By comparing what happens to students under different circumstances, theoretically, academic leaders should be able to progress the institution based on what is learned. We typically do not do this in higher education.

To leverage the use of research and data, one technique that has proven to be effective is to tie a local initiative to a national effort - which again comes back to the need for leadership. For example, with the “Achieving the Dream” initiative—a reform movement in the U.S. to improve student success at community colleges—institutions come together and commit to using data to make improvements within the institution based on what is learned. Similarly, with course redesign, institutions can join state or national programs. In this way, individual institutions do not take on something new just on their own, but tie the initiative to something larger as part of a new kind of cultural movement that is going on throughout higher education.

### 3. From a best practices perspective, what factors are critical to the effective engagement of both faculty and students in a course redesign initiative?

One of the challenges many institutions face in a change initiative is the ability for faculty to let go of the old ways of doing things. Institutions would be well advised to start with faculty who are keen to change and try new methods. Once the new models are identified and explored in concrete terms, faculty resistance tends to break down. Many faculty fear change because change represents the unknown. But if you can demonstrate success in concrete terms, then it starts to break down resistance.

The Math Emporium model for the redesign of developmental math programs is a great example. Once an established model

has succeeded with thousands of students over a period of a decade or more, it becomes a powerful tool for administrators to use in generating interest among faculty in trying something new. This is the strength behind the Math Emporium. Now that there are many examples of the model at all kinds of institutions, administrators can send faculty teams to visit one of the institutions, or invite one or more speakers to come and meet with academic departments. There are lots of ways to leverage these concrete models to raise awareness and interest with faculty. This is extremely important. Because the models measure student learning very carefully, it helps convince skeptical faculty that the new models do, in fact, work.

From a student perspective, many students have a history of failure in mathematics. When taught in the traditional way, some 60% tend to fail repeatedly. When students achieve improved academic performance, their own sense of success and accomplishment becomes a powerful motivator.

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### Resources

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# A MANAGEABLE REVOLUTION:

# FLIPPING

## the Faculty from the Lecture Model to

Faculty members continue to struggle to effectively teach traditionally aged students, who bring very different traits and expectations to higher education (Taylor 2010, 2011). Their issues with academic preparation and expectation, responsibility, esteem and importance concerns, and their use of and dependence on technology are challenging traditional higher education instructional practices (Prensky, 2001a, 2001b; Taylor, 2005, 2006, 2007, 2015; Twenge, 2006).

Learning outcomes and workplace readiness issues have come under increased scrutiny and criticism as the public questions the effectiveness of higher education practices and outcomes when addressing this generation's learning experiences (Arum and Roska, 2011; Hersch and Merrow, 2005; Bok, 2006).

Real and perceived problems can be traced to a very simple cause: the people hired as instructors may not be adequately trained to teach. We employ subject-matter experts, research scientists, and practitioners and then assign them the responsibility of bringing students to particular learning outcomes; a job for which they have not been prepared.

Faculty development around teaching skills is uneven at best, and frequently made available only to those who ask for it. At research colleges and universities, this is complicated by the fact that teaching is often not perceived as the most important part of a faculty member's job. As has long been the tradition, research, grant writing, managing graduate programs, committee involvement, various community and social involvements, and administration may have a greater impact on remuneration, job security, promotion, and tenure than actually teaching, much less developing the skills necessary to effectively teach or to measure student learning outcomes.

So what do subject-matter experts with little or no training on methods of effective college teaching do? They teach the way they were taught, lecturing on the content to passive students instead of applying the data on best practices on bringing

students to meaningful, lasting learning outcomes (Berrett, 2014; Weimer, 2002). Anyone who doubts that the lecture model is pervasive need only observe a sample of classes in session at most schools.

A reliance on lecture is the epitome of what seminal writers like Gardiner (1994, 1998) and Barr and Tagg (1995) criticized as the teaching model, where colleges are seen to exist *to provide instruction*. Colleges and universities should exist *to bring about learning in students*. This article is intended to help academic administrators move faculty from the traditional, lecture-based teaching model (hereafter referred to as the *lecture model*) to an active, learning and learner centered best-practices model (hereafter referred to as *research-based instruction*). A succinct summation of the wealth of evidence from learning outcomes research, neuroscience, and cognitive psychology that forms the foundation of research-based instruction is that the one who does the work does the learning (Doyle, 2011; Leamson, 1999; Zull, 2002). So, most simply, the job of instructors is not to do the work themselves (lecture) but to plan and direct the work of students.

The reasons for moving from the lecture model to research-based instruction – primarily improved learning outcomes – and the corresponding methods are not secret and have been explicated and promoted by many scholars, including Arthur Chickering and Zelda Gamson (1987), Terry O'Banion (1999), Lee Fink (2003), Terry Doyle (2008, 2011), and Linda Nilson (2010) and in the ongoing work of Maryellen Weimer (2002) and Eric Mazur (1997).

One practical and readily accessible application of research-based instruction is the flipped classroom. It is generally attributed to Harvard physics professor Eric Mazur, who is also its most public face and advocate through his model of Peer Instruction (Berrett, 2016; Mazur, 1997). In the flipped



# Research-Based Instruction DR. MARK TAYLOR

classroom students are required to prepare for each class meeting, generally at the content level. Student preparation for each class meeting is expected and assessed, and is a prerequisite for full participation in the class session. During class time, students engage in a variety of interactional activities with faculty facilitation. These activities solidify remembering the content for fluent recall and help learners reach higher order cognitive and skills-based outcomes. While there are many active learning techniques that promote student engagement, they have in common that the instructor is coordinating students doing the work of their own learning, as opposed to simply lecturing on content.

Besides improving learning outcomes, the processes of the flipped classroom can increase workplace readiness, as course mechanics are more aligned with workplace expectations than are the processes and expectations of classes based on the lecture model. The requirement that students come to class on time and be prepared helps them develop the responsibility necessary to meet similar expectations in the workplace, as well as helping students acquire basic workplace habits like timeliness and productivity. The active learning format helps students develop communication, cooperation, and interactional skills, also valued in the workplace. As classes move more fully to these best practices, overall workplace readiness and the satisfaction of employers with graduates may increase. It might also be noted that active classes are more engaging for students - and student engagement increases student persistence (Deslauriers, Schelew, and Wieman, 2011; Kuh, Kinzie, Schuh, and Whitt, 2005).

Readers who want more information on the applications of research-based instruction are encouraged to review *Teaching Generation NeXt*, which describes a model especially appropriate for the current cohort of digitally engaged students, briefly described below (Taylor 2010, 2011, 2012).

## TEACHING GENERATION NEXT MODEL SUMMARY:

### 1. IMPROVE STUDENT FUTURE ORIENTATION

Most students attend college with the plan of entering a professional field. “Don’t talk to students. Talk to the professional they aspire to become,” is the motto. Faculty members are encouraged to help students focus on the professional they aspire to become, with its requisite abilities and skills. Students may be coached to look past the student roles they currently occupy and to look ahead to the intended goal of occupying a professional role.

### 2. IDENTIFY CLASS GOALS AND LINK TO STUDENT GOALS

Once students better focus on their future goals, instructors can help them link the desired outcomes of the particular course to their professional goals. People learn what they regard as relevant to them; they care about information and skills that they see as having value to them (Svinicki, 2004). Faculty can help students better understand the desired outcomes of the course, and how reaching these can help students in their future professional roles.

### 3. IMPROVE STUDENT UNDERSTANDING OF CLASS EXPECTATIONS

Faculty should not assume that students know what they need to do to be successful learners, especially in classes organized around research-based instruction. To improve compliance, instructors are encouraged to spend time helping students understand the requirements and process of their class, and the rationales for increased student effort, required homework, and in-class activity.

“WHILE IT IS POSSIBLE TO ADOPT A FLIPPED CLASSROOM MODEL WITH TRADITIONAL TEXTBOOKS AND PRINTED JOURNAL RESOURCES, ONLINE RESOURCES FROM BOTH ACADEMIC AND NON-ACADEMIC PROVIDERS MAKE CONTENT ACCESSIBLE IN VISUAL AND INTERACTIVE FORMATS THAT ARE OFTEN MORE ATTRACTIVE TO TODAY’S DIGITAL LEARNERS.”



#### 4. MOVE CONTENT LEARNING OUT OF CLASS

When faculty move the introduction to course content out of class they can use class time for learning activities designed to help students consolidate and recall information, and to develop skills needed to apply the information to new settings (Draves, 2002; Smith, 2008, 2014). To accomplish this, it is necessary to identify or create appropriate materials for students to use in preparing for class. While it is possible to adopt a flipped classroom model with traditional textbooks and printed journal resources, online resources from both academic and non-academic providers make content accessible in visual and interactive formats that are often more attractive to today’s digital learners (Taylor, 2012). In addition to this available digital content, faculty can use various technologies to capture content they create. Instructors can make their own best explanation available for students to use in preparation for class meetings through generally easy to use production tools. This capture can be as simple as voice-over of presentation slides. If the instructor delivers the lecture during a class session, each student has one opportunity to experience it. If that same content is available out of class, each student can interact with the content as many times as necessary to remember and understand it (Smith, 2008, 2014). When this out-of-class work has a built-in homework assignment, instructors can check completion before class starts to verify that students have adequately prepared.

#### 5. CREATE THE NECESSITY OF PREPARING FOR AND ATTENDING CLASS

Since a central feature of an effective flipped classroom is that preparation for class is a meaningful prerequisite to participating in the active learning class time, then the instructor must be able to confirm that students have prepared before class activities start. Students who have not done the content-level homework are not prepared for the activities of the class meeting, which may require recall of that content, so unprepared students cannot move into class activities. There are many possible techniques for ensuring both preparation and attendance, including students responding to items via the learning management system before scheduled class times or showing completed homework to the instructor when entering the classroom. A quiz at the beginning of the class meeting using an audience response system to assess preparation can be effective, especially in large classes (Deslauriers, Schelew, and Wieman, 2011). Instructors may want to consider awarding points for completion of homework presented before the class meeting, which also ensures attendance. Faculty members are discouraged from denying admission to the class to unprepared students. Those students might be allowed to complete the homework during class time, possibly for partial credit, while prepared students participate in the active learning exercises.

#### 6. INCREASE CLASSROOM LEARNING AND ACTIVITY AND ENGAGEMENT

While the literature on classroom activities is vast and often discipline specific, the following general processes apply across the curriculum:

Desired Learning Outcome	Suggested Student Activity
Remembering or Understanding	Explain content or ideas to another student
Acquire a particular skill	Observe expert demonstration of skill (may be moved out of class)
	Practice that skill (ideally while being monitored, possibly by another student)
	Teach another student how to perform the skill
Evaluate	Discuss and debate using evidence-based arguments
Care about or see worth in information or skills	To convince the student of its importance, tell another student how this information or skill will help him/her in the future.



**“IMPROVED ACCOUNTABILITY IMPACTS BOTH STUDENTS AND INSTRUCTORS. FOR STUDENTS, INCREASED ACCOUNTABILITY IS REALIZED BY BEING RESPONSIBLE FOR PREPARING FOR CLASS AND FOR ACTIVELY PARTICIPATING DURING CLASS TIME.”**

## **7. IMPROVE ASSESSMENTS & ACCOUNTABILITY**

Assessment of student learning in many college courses is often limited to a few graded events as required for measures of productivity, possibly as few as two tests. Instructors moving to research-based instruction are encouraged to use multiple, graded, cumulative evaluations, as well as formative assessments of the learning process and of individual student learning, since students learn more from being tested than they do from reviewing content (Dempster, 1997; Roediger and Karpicke, 2006).

Improved accountability impacts both students and instructors. For students, increased accountability is realized by being responsible for preparing for class and for actively participating during class time. For faculty, increased accountability refers to recognizing the obligation to improve educational practices, as described here, to better meet the legitimate learning and developmental expectations of students, their parents, accrediting bodies, governmental and other funders, as well as of the society at large. Faculty assume the role of mentor and coach for learning and the maturation of their students who have usually entered college at a developmentally critical time in their lives. The combination of development and learning are crucial to preparing these students for the workforce and career they choose, and for functioning as competent adults in the culture. This requires instructors to incorporate research-based instruction in order to maximize the learning impacts of our time with students, especially if we aspire to be competent, effective, accountable teaching professionals.

### **A MANAGEABLE REVOLUTION - FLIPPING THE FACULTY FROM THE LECTURE MODEL TO RESEARCH-BASED INSTRUCTION**

An academic culture shift from the lecture model to research-based instruction is not easy but is absolutely necessary if we are serious of about helping students reach lasting, meaningful, functional learning goals, becoming workplace ready, and becoming mature, responsible adults. Academic leaders can help faculty adopt research-based instruction. The change will be revolutionary on many campuses because it is such a major shift in teaching culture away from current practice. With appropriate academic leadership and the commitment to meet the needs of our students, the culture change can be managed effectively and with positive results.

Academic administrators can start with the assumption that instructors are people of good will who, almost without exception, want students to learn and grow in deep and lasting ways. Instructors are passionate about their disciplines, and they want to share what they know. They want students to learn, to mature, and to become more responsible during their time in school.

Academic leaders might also accept that instructors using the lecture model are doing the best they know how, given their training or lack thereof. Faculty ensconced in the lecture model are not only teaching the way they were taught, but they are probably teaching the way they prefer to be taught, since many faculty tend to be abstract, reflective learners, unlike their students who tend to be more concrete (Schroder, 1993).

Instructors will need training on research-based instruction. Higher education faculty, as scholars, may respond to an academic approach: faculty development programs starting with the theory and moving to practice. Readings on learning theory and research-based instruction from the masters like Lion Gardiner (1998), Robert Barr and John Tagg (1995, 2005), Arthur Chickering and Zelda Gamson (1987), and Terry O'Banion (1999) can provide a foundation. Continued exploration can move instructors from theory to technique to practical application through the work of Lee Fink (2003), Terry Doyle (2008, 2011), Linda Nilson (2010), Eric Mazur (1997), Robin Smith (2008, 2014), Mark Taylor (2010, 2011, 2012), and Maryellen Weimer (2003).

Once instructors understand the theoretical and practice basics of research-based instruction they can begin developing specific skills. Training topics might include instructional technologies like content capture (to move content-level learning out of class), adding voice-over to slide presentations, and the effective use of online learning management and collaboration systems. Audience response systems are an especially effective form of instructional technology that have been demonstrated to improve in-class engagement and to facilitate active learning and Peer Instruction (Bruff, 2009; Caldwell, 2007; Duncan, 2005; Mazur, 1997).

Also critical is helping faculty develop skills in facilitating an active learning classroom. Specifically, they need to learn what to do during class time if they are not lecturing. If this training can also demonstrate the techniques, faculty can experience the methods as well as plan to use them in their classes. These activities can range from Mazur's (1997) Peer Instruction to the techniques



summarized by Nilson (2010) including think-pair-share, pairs check, and jigsaw groups, to demonstrations and problem-based learning. Once instructors have some experience and success with active classes, they may be inclined and inspired to seek out additional techniques. An online search on “active learning techniques in (name of subject)” will provide a wealth of ideas and resources.

Faculty development activities that facilitate understanding of research-based instruction and its impact on student learning can serve to convince faculty of its effectiveness. Introducing them to the vast and convincing literature on the research backing these approaches will likely have an impact as well. When faculty members have contact with instructional exemplars who have been early adopters of research-based instruction and who exist on most campuses, they can come to see that the methods are doable.

In order for faculty to adopt best practices, academic leaders must address concerns over poor student evaluations when faculty members move from the lecture model to research-based instruction. In “Improved Learning in a Large-Enrollment Physics Class,” Deslauriers, Schelew, and Wieman (2011) demonstrate “increased attendance, higher engagement and more than twice the learning” in the experimental group using “research-based instruction” compared to the control group, which was taught through “traditional lecture given by an experienced, highly rated instructor” (p. 862). Results showed that most of the students in the lecture group did not pass the end of unit test, while most of the research-based instruction group did pass. This casts doubts on the ability of students to effectively evaluate their instructors or the instruction they receive using traditional end of course evaluation tools. Traditional student evaluations might be replaced by other measures including meaningful assessments of learning outcomes, student evaluations that assess the frequency with which their instructors used best practice, and even live, in-class audits of what instructors and students are actually doing during class time that may or may not demonstrate research-based instruction in action (Berrett, 2014; Smith, Jones, Gilbert, and Wieman, 2013).

Effective teaching needs to become a priority at every post-secondary institution. While faculty at liberal arts colleges, community and technical colleges, and professional schools would generally report that teaching students is the most important part of their jobs, this is not always the case at universities, where research and grant writing might be more important, especially when employment security, tenure, and promotion are considered. Informal university dynamics can have a chilling effect on instructors moving to research-based instruction, as can peer pressure to avoid “rocking the boat” of traditional lecture-based teaching, which often dominates an academic culture. If progressive instructors are supervised by senior faculty who practice the lecture model, they may be reluctant to demonstrate research-based practices for fear of receiving negative evaluations from those superiors, especially when those evaluations

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might impact progress toward tenure. Universities might want to consider separate tenure track paths that focus more on either instruction or research, with the research track faculty being excused from teaching. Evidence of the demonstration of research-based practice may become a part of tenure decisions for those with teaching responsibilities. As research-based practice brings better learning outcomes, assessments of student learning might replace other evaluations altogether.

#### CALL TO ACTION

The pedagogy of the past will neither engage our students nor prepare them for the work of the future. Recognizing this, as well as the diverse learning needs of our incoming traditional students, is the first step in higher education reform toward more effective teaching practices. Helping our academic administrators understand the transition from the lecture, passive learning model to more dynamic, active, and research-based instructional practice is essential in providing professional development and support for alternative classroom designs and practices. Hopefully this article will stimulate discussion and ideas that can be shared to provide the leadership to manage the revolution from lecture modes to research-based best practices in our classrooms.

#### ABOUT THE AUTHOR



Dr. Mark Taylor is an award-winning speaker recognized internationally as an educator, expert, and consultant on the forefront of transformations in educational practice and workplace management. As an authority on generational relations and the traits, developmental issues, and learning outcomes of today’s young people, he is dedicated to helping colleges, universities, and professional programs better understand and serve our students for learning, development, persistence, and successful integration into the “after college” world through keynotes, seminars, and workshops. He is founder and President of Taylor Programs and may be reached at [mark@taylorprograms.com](mailto:mark@taylorprograms.com).

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**THE CHAIR ACADEMY'S 26TH ANNUAL  
INTERNATIONAL LEADERSHIP CONFERENCE  
MARCH 28-31, 2017 - ORLANDO, FLORIDA**

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# THE CHAIR ACADEMY'S 26TH ANNUAL INTERNATIONAL LEADERSHIP CONFERENCE

## FEATURED KEYNOTE SPEAKERS

The Chair Academy's International Conference is proud to present the 2017 conference keynote speakers. These cutting-edge presenters represent the best in transformational leadership and will inspire and teach leadership best practices during their presentations.



**KEN  
STEELE**

Author, Speaker



**PAT  
WILLIAMS**

Speaker, Executive,  
Author



**MEG  
WHEATLEY**

Author, Speaker



**JANE  
JENKINS-  
HERLONG**

Speaker, Comedienne

## PRE-CONFERENCE SKILL-BUILDING WORKSHOPS

The Chair Academy offers each participant an expanded conference experience. For \$125, conference participants can attend a full-day, pre-conference skill-building workshop. These workshops are intended to provide participants with essential skills and knowledge that they can bring back to their organizations.

### THE TRICK TO BEING A CHAIR OR ORGANIZATIONAL LEADER

*Presented by Bill Lamb, Kirkwood Community College*

The workshop will present a variety of strategies for new front-line administrators, including chairs, directors, deans, and other organizational leaders. Activities throughout the day will help participants define their role as leaders and share strategies to develop cohesive teams.

### THE PILOTED SELF: FLYING LEADERSHIP TO NEW HEIGHTS

*Presented by Candace Croft, Tabankhu, and Keith Smith, Kaplan University*

This interactive workshop takes the evolution of authentic leadership to new heights. Topics include self-awareness, the effects of various conditions on one's craft (self), and tools for pre- and mid-flight adjustments to stay on course as a person and leader.

### STRATEGIC PREPAREDNESS: "NEW THINK LEADERSHIP" TEAM

*Presented by Clifton Taulbert, Freemount Corporation, Tulsa Oklahoma*

This workshop will give leaders/participants an opportunity to choose what they perceive to be the top two issues facing community college leadership today and the strategic preparedness required to meet those challenges. The workshop conversation will be guided to ensure alignment with real community colleges issues.

### THE WORLD OF EVERYTHING DiSC

*Presented by Rose Marie Sloan, The Chair Academy*

This workshop will use the DiSC model and provide participants with an understanding of their own work behavioral styles, as well as other styles, to help them connect better with colleagues and build more effective relationships.

### STRENGTHS STRATEGY FOR SUCCESS - APPLYING STRENGTHS TO WORK AND LIFE

*Presented by Lisa C. Gregory, Strengths Strategy, Inc.*

In this interactive applied learning experience, you will learn how to identify and strategically use your uniqueness to create contribution and build effective partnerships with others to support that contribution. You will also begin to see the uniqueness of others in new ways which will transform both work and relationships.

# THE CHAIR ACADEMY'S 26TH ANNUAL INTERNATIONAL LEADERSHIP CONFERENCE

## CONFERENCE SITE/HOTEL

The Chair Academy's International Conference will be held at the  
**Caribe Royale, Orlando, Florida.**  
**A ten minute shuttle from Disney World!**

### The Caribe Royale

8101 World Center Drive, Orlando, Florida, 32821  
Phone reservations: 1-888-258-7501 / 407-238-8000

Identify yourself as a *Chair Academy Conference Attendee*.

Online Reservations can be made by visiting the Chair Academy's conference website.

### Conference Room Rate:

Queen and King: **\$179.00**/night plus taxes and fees  
King Deluxe **\$199.00**/night plus taxes and fees  
Executive Suite: **\$304.00**/night plus taxes and fees  
Villas: **\$259.00**/night plus taxes and fees

**Parking is free/Valet parking is \$12/night**



**Hotel rate is available until March 1, 2017.  
Standard room rates after this date.**

## CONFERENCE SCHEDULE HIGHLIGHTS

Here are just some of the events you can attend with your conference registration:

### Tuesday, March 28, 2017

9:00am-3:00pm

Pre-Conference Workshops

### Wednesday, March 29, 2017

8:00am-10:00am

Opening General Session

Keynote Speaker - Ken Steele

Paul A. Elsner Awards

10:30am-3:00pm

Concurrent/Roundtable Breakout Sessions

3:30pm-5:30pm

Second General Session

Keynote Speaker - Pat Williams

Director's Award

### Thursday, March 30, 2017

8:00am-10:00am

Third General Session

Keynote Speaker - Meg Wheatley

Exemplary Leadership Awards

10:30am-12:00pm and 1:30pm-3:00pm

Concurrent/Roundtable Breakout Sessions

3:30pm-5:00pm

Closing General Session

Keynote Speaker - Jane Jenkins-Herlong

### Friday, March 31, 2017

8:00am-10:00am

Breakfast, Closing Conference Session, and Networking Summit

Visit us online to learn more about or register for the Conference  
[www.chairacademy.com/index\\_conf.html](http://www.chairacademy.com/index_conf.html)

# THE ALUMNI OF LEADERSHIP

RECOGNIZING ACADEMY ALUMNI

The Chair Academy wants to recognize all of the academic leaders who are taking the first step toward becoming *Transformational Leaders*, and to celebrate those leaders who graduated from Academy programs this summer!

## Recognizing and Celebrating Our 2015-2016 Academy Graduates

### Advanced British Columbia

Beloin, Laurene  
Carpenter, Matt  
Choi, Jamie NaYoung  
Clarke, Trevor  
Dingley, Louis  
Harmer, Guy  
Jivraj, Ashif  
Lawlor, Peter  
Lew, Shirley  
Mazerolle, Cindy  
Miller, Peter  
Mitchell, Michelle  
Pittet, Lisa  
Salem, Stephen  
Shadmehr, Ramin  
Ting, Elle  
Wallace-Hulecki, Lynda  
Zakoor, Jo-Ellen  
Zikakis, Lindsey

### Advanced Florida

Adleburg, Frances  
Bakke, Jennifer  
Burnett, Gayla  
Campbell, Corey  
Caron, Justine  
Dufurat, Ewa  
Ermer, Scott  
Fritz, Sarah  
Goodwin, Cheryl  
Hogan, Kay

Meccouri, Linda  
Morse, Michael  
Norton, Jeremy  
Olden, Scott  
Phillips, Heather  
Rivera- Hainaj, Rosa  
Robinson, Cheryl  
Santos, Noema  
Strahn-Koller, Brooke

### Advanced Ontario

Adamson, Nancey  
Babcock, Geraldine  
Bruce, Biljana  
Clace, Rick  
Dumanski, Kathy  
Dunbar, Deborah  
Edwards, James  
Gemmill, Richard  
Hunter, Mark  
Kapelus, Gary  
Lalka, Olga  
Lunn, Deana  
Lameiro, Miguel  
Macdougall, Michael  
McClelland, Alan  
McQuaid, Terry  
Miller, Susan  
Moore, Michelle  
Mutchler, Cindy  
Nouroozifar, Mona  
Palson, Leslie  
Patel, Nicky  
Pynn, Tania  
Rogers, Lisa  
Strickland, Shane  
Sutton, Angela  
Szautner, Jim  
Ta, Khon

Tapper, Moreen  
Valley, Pierre  
Vozza, Clare  
Waite, Barry  
Watts, Barb

### Advanced Wisconsin (WLDI)

Abts, Polly  
Ammon, Richard  
Balacek, Patti  
Docter, Sandra  
Ferrel, Kate  
Flynn, Gary  
Gephartdt, Kristin  
Kinnen, Sandy  
Kohl, Erin  
Lange, Thomas  
Maas, Lisa  
Marconi, Robert  
Nygard, Jason  
Rzeznik, Mark  
Rixie, Gretchen  
Sanders, Emily  
Schmit, Matt

### Alberta

Ackroyd, Bradley  
Arsenault, Normand  
Beattie, Mark  
Buitelaar, Marlen  
Donofrio, Jen  
Ellis, Gabriel  
Forrest, Tracey  
Fry, Eric  
Gaudette, Paul  
Gouin, Aaron  
Grimes, Michelle  
Gulka, Les

Helmer, Ken  
Holden, Nancy  
Humby, Ross  
Hunter, Joanne  
Jeppesen, Alison  
Jordan, Rysen  
Keenan, Donald  
Kessel, Shane  
MacLachlan, Nora  
MacLean, Christa  
McCready, Erin  
Morrell, Amy  
Nielsen, Juliet  
Ouchi, Travis  
Overes, Doug  
Pannu, Gursher  
Paul, Grant  
Reid, Kathy  
Rochman, Lisa  
Rohde, Sven  
Sandercock, Jim  
Sayer, Leslie  
Soucie, Camille  
St. George, Bonnie  
Spurgeon, Doug  
Steinhauer, Sharleen  
Stroobant, Richard  
Topolnitsky, Tracy  
Turner, Lisa  
Van Dyke, Marja  
Wall, Mark  
Weinert, Dan  
Williamson, Jessica  
Wilson, Fiona  
Zinyemba, Maroro

## British Columbia

Abbott, Joseph  
Bobb, Jill  
Bowling, Charity  
Burkholder, Paul  
Busick, Rhea Hammitt,  
Jennifer  
Hill, Sarah  
Hysell, Deb  
Keller, Wendi  
Kincaid, Heather  
Kline, Elizabeth  
Lawler, Kim  
Longkumer, Senti  
Nunn-Ellison, Keri  
Orlando, Elizabeth  
Piggrem, Gary  
Reardon, Kevin  
Shappell, Andrew  
Shore, Allen  
Wagner, Dan  
Weirick, Chad  
Wilson, Amy

## Great Lakes

Austin, Chad  
Barnett, Scott  
Boza, Lynn  
Cazares, Aura  
Claybourne, Chardin  
Clegg, Toni  
Ducher, Amy  
Dull, Laura  
Ford, Nikole  
Gary, Stephen  
Hommel, Joyce  
Hoppmann, Ken  
Humphrey, Tim  
Lanzon, Patricia  
Larkowski, Peter  
Louis, Naomi  
Moore, Trina  
Rue, Kyrsten  
Stilianos, Krishna  
Suniga, Ed  
Szymanski, Debbie  
Traverse, Donovan  
Willis, Leigh  
Wihlm, Cathy

## Luoma

Anderson, Shawn  
Anderson, Layne  
Arnold, Angela  
Bernstrom, Daniel  
Bestul, Lisa



Blunsom, Laurie  
Brady-Santwire, Colleen  
Brookins King, Jennifer  
Canavan, Amy  
Carlson, Nicky  
Carney, Jeremy  
Coleman, Taiyon  
Conklin, Daniel  
Deiman-Thornton, Ann  
Doss, Brad  
Elness, Jodi  
Fier, Sara  
Forsman, Deanna  
Fujieda, Eri  
Gardner, Matt  
Hughes, Derek  
Huntington, Miki  
Johns, Sean  
Chervenak, Tom  
Johnson, Erica  
Jones, Jason  
Khoo, PohLin  
Komoto, Cary  
Lauritsen, Jessica  
Lutz, Julie  
Master, Dawn  
Meine, Peter  
Meulemans, Nicole  
Meyers, Julie  
Nelson, Kyja  
Nordby, Mike  
Northam, Andrea  
Olson, Sean  
Paulus, Eugenia  
Rathert, Greg  
Rose, Gregory  
Sewell, Matt  
Tebben, Judy  
Thompson, Betsy  
Vargas Essex, Julio  
Vue, Ger  
Wallace, Teri  
Weng, Pangyen  
Woodward, Sara  
Yearous, John  
Zahler, Tony

## Northeast (NELDI)

Amaru, Chris  
Amritkumar, Suchi  
Bender, Jackie  
Bertolino, Donna  
Boyle, Patrick  
Brocatto, Carlos  
Carreras-Hubbard, Karen  
Curry, Susan  
Fernandes, Jefferson  
Fernandes, Maria  
Firth, Christopher  
Frost, Jessica  
Gilkey, Francesca  
Guay, Veronica  
Martin, Lesli  
McDermot, Sharon  
Minish, Deb  
Mores, Heather  
Mullin, Theresa  
Mulry, Heather  
O'Neil, Scott  
Pellegrino, Lauren  
Perry, Kristy  
Ree, Ashli  
Saldrini, Laura  
Santos Silva, Lee  
Morrison, Jane  
Sullivan, Steven  
Tejada, Jeffrey  
Tirrell, Loreen  
Weir, Lori  
Walo, Douglas

## Southwest

Booker, Michael  
Burgin, Teresa  
Cox, Ramona  
Deer, Joe  
Fetherlin, Sheila  
Gaiters-Jordan, Jacquelyn  
Hertig, Vicky  
Jewell, Jeanine  
McCaslin, Martha  
McCauley, Diane  
Montoya, Danois

Mount, Terry  
Osborne, Amy  
Peschek, Shana  
Philips, Carol  
Sansom, Karen  
Slagell Gossen, Reonna  
To, Rosanna  
Wood, Susan

## Wisconsin (WLDI)

Bailkey, Emilie  
Bowers, Tracie  
Cartwright-Collins, Carissa  
Charles, Amy  
Cisewski, Greg  
Collins, Katherine (Kit)  
DeGeare, Christopher  
DeLeon, Rolando  
Doar, Kathryn  
Evans, Kathy  
Fann, Monica  
Feggstad, Jessica  
Funari, Anthony  
Gohde, Amanda  
Gunia, Kristin  
Hemenway, Jessica  
Hopper, Stephanie  
Jachowicz, Lynette  
Johnson, Sharnell  
Johnson, Crystal  
Jonas, Debra  
Kautza, Jeremy  
Kavanaugh, Sarah  
Kistner, Angie  
Kohler, Karen  
Konitzer, April  
Lankisch, Karen  
Laquitha, Terry (Elle)  
Larsen, Leslie  
Maxson, Claire  
McHenry, Christopher  
Meehan, Casey  
Mirus, Kevin  
Neitzel, Lynn  
Poellinger, Michael  
Seubert, Kelsi  
Schwartz, Jessica  
Skelton, Brian  
Solomon, Debra  
Stuckenbruck, Emily  
Vaux, Jim  
Van De Loo, John  
Waterman, Doug  
Wilson, Kenny  
Woods, Danika





**2016-2017  
Academy Leaders  
Beginning Their  
Journey**

**Advanced  
Long Island (LIALA)**

Atwood, Alexander  
Boecherer, Michael  
Bosco, Nicholas  
Brady, Christine  
Crowe, Christine  
Densmore, Timothy  
Dereme, Theresa  
Dovell, Karen  
Gherardi, Christopher  
Gutowski, Sarah  
Hahn, Troy  
Heraghty, Alphonses  
Hill, Robin  
Napolitano, Joe  
Seger, Bruce  
Smith, Phoebe  
Sta Maria, Maria  
Tucker, W Troy  
Velazquez, Tania  
Warshauer, Leanne  
Wolfson, Joshua

**Advanced  
Wisconsin (WLDI)**

Burgau, Tam  
Caldero, Ana  
Canavera, Jennifer  
Daykin, Rande  
Hamm, Doug  
Kasubaski, Carrie  
Kettner-Sieber, Jackie  
Morris, Jacqueline  
Persinger, Bill  
Schmit, Myke

Sullivan, Jeff  
Wunderlich, Valarie

**Alberta**

Baky, Emma  
Batsuren, Eenjin  
Benner, Loanne  
Berard, Nicole  
Betker, Alfie  
Bielert, Shari  
Black-Allen, Jesse  
Brittain, Bruce  
Chell, Wanda  
Cygman, Leon  
Domeij, Brenda  
Finnigan, Jason  
Forer, Morai  
Gifford, Cassandra  
Hammel, Graham  
Hawkins, Norm  
Hessel, Susan  
Holden, Lynda  
Howe, Billy Jo  
Hunter, Wayne  
Jamieson, Lisa  
Jungert, Claudia  
Kinelovsky, Dasha  
McDonald, Karen  
Morley, Enda  
Noble, Kim  
O'Donnell, Debbie  
O'Toole, Thomas  
Ober, Lyle  
Ortiz-Hernandez, Pablo  
Padua, Rodel  
Patrie, Nicole  
Perron, Melanie  
Pohorelic, Scott  
Roy-Heaton, Catherine  
Sabeti, Milad  
Scroggins, Stephanie  
Seitz, Tracey

Seward (Nowensky),  
Amanda  
Steman, Mike  
Telfer, Tricia  
Toner, Seamus  
Violot, Carrie  
Vuong, Alice  
Walsh, Arlene  
Topolinsky, Derek

**Northeast (NELDI)**

Baker, Barbara  
Barrio, Paulo  
Bautista, Aurora  
Blumberg, Liz  
Cohen, Debra  
Coughlin, Colleen  
Davis, Lynne  
Davis-Eyene, Mishawn  
Ellis, Lauren  
Farley-Larocca, Lynda  
Foley, Gina  
Frazier, Ricky  
Gilson, Jannie  
Green, Russell  
Hammond, Brady  
Harrington, Liza  
Jackson, Courtney  
Javdekar, Chitra  
Johnson, Carol  
Kim, Young Bae  
Lapomardo, Elaine  
Lynedecker, Gingher  
McManus, Sharon  
Mooney, Nicole  
Moore, Ashley  
Moyano Camihort, Karin  
Popeney, Mark  
Richardson, Tammy  
Simmons, Jenilee  
Simms, Sara  
Sims, Hillel  
States, Hollyce  
Sugarman, Cristy  
Taimanao, Zerlyn  
Wixsom, Rick  
Stein, Michelle  
Monestime, Carrie

**Ohio**

Abbott, Joseph  
Bobb, Jill  
Bowling, Charity  
Burkholder, Paul  
Busick, Rhea  
Hammitt, Jennifer

Hill, Sarah  
Hysell, Deb  
Keller, Wendi  
Kincaid, Heather  
Kline, Elizabeth  
Lawler, Kim  
Longkumer, Senti  
Nunn-Ellison, Keri  
Orlando, Elizabeth  
Piggrem, Gary  
Reardon, Kevin  
Shappell, Andrew  
Shore, Allen  
Wagner, Dan  
Weirick, Chad  
Wilson, Amy

**Wisconsin (WLDI)**

Adams, Sarah  
Anderegg, Jennifer  
Barker, Karen  
Camillo, Ann  
Church Hoffman, Mandy  
Cioci, Jessica  
Clark, Amy  
Cooke, Audra  
Ellie, Bethine  
Fitch, Lynn  
Foley, Kevin  
Foley, Andrea  
Fontanez, Carol  
Gerke Corrigan, Shannon  
Graf, Brandon  
Hader, Joan  
Havlik, Shannon  
Hayden, Melissa  
Konruff, Ben  
LaVoy, Lynea  
Mero, Kasondra  
Merrill, Henty  
Nasgovitz, Wendy  
Osinski, Laura  
Panke, Aaron  
Ravn, Tracy  
Rickert, Diana  
Sandmann, Suzanne  
Schindler, Brooke  
Schroeder-Beers, Mona  
Smith, Bob  
Small-Taylor, Wendy  
Soodsma, Heidi  
Walker, Kate  
Weber, Debra  
Wind-Norton, Laura

# THE ALUMNI OF LEADERSHIP

RECOGNIZING ACADEMY ALUMNI



**Dr. Dorey Diab**  
President of North  
Central State College



**Pervin Fahim**  
Accepted to the Graduate Certificate  
in Systems Leadership in Higher  
Education, Royal Roads University



**Dr. Shouan Pan**  
Named Chancellor of  
Seattle Community  
College System



**Jennifer Methvin**  
President of  
Crowder College



**Jacque Orr**  
Named Budget Analyst, Information  
Technology Service, Maricopa  
County Community College District



**Dr. Ann Krause Hanson**  
Named Vice President,  
Strategic Marketing, Innovation,  
& Effectiveness, Waukesha  
County Technical College



**Deborah Wolfson**  
Named College Assistant Dean  
of Academic Affairs, Suffolk  
County Community College



**Dr. Jeffrey Yergler**  
Named Chair, Department  
of Management, Undergraduate  
Programs, Golden Gate University

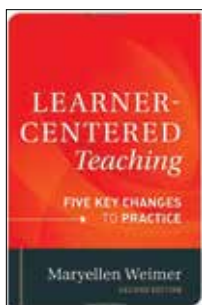


**Dr. Roger Yohe**  
Named Vice President,  
Academic Affairs,  
Palm Beach State College

# THE LITERATURE OF LEADERSHIP

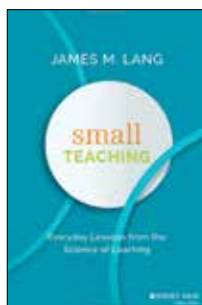


REVIEWS BY LYNDA WALLACE-HULECKI, Ed.D.



**LEARNER-CENTERED TEACHING: FIVE KEY CHANGES TO PRACTICE, 2ND EDITION**  
Maryellen Weimer  
Jossey-Bass (2013)

Drawing from her extensive experience as an educator, author, and advocate for effective teaching practices, Weimer discusses five key areas of required change in teaching practice including: (1) the role of the teacher, (2) the balance of power, (3) the function of content, (4) the responsibility for learning, and (5) the purpose and processes of evaluation. Many of the identified areas for change challenge traditional ways of thinking about the roles and responsibilities of instructors and students. While the book focuses primarily on change at the course level, the author raises critical issues associated with the need for adopting learner-centered teaching as a guiding institutional philosophy. She argues that when change occurs episodically at an individual course level students have learner-centered experiences “by chance”, and thus experience only marginal benefit. Weimer identifies issues and strategies for addressing student and faculty resistance to change, and discusses developmental issues underlying student learning. However, the book falls somewhat short on identifying strategies for advancing institution-wide reform. This book is a useful resource for educators who seek insights on learner-centered teaching approaches, as well as for academic leaders who aim to promote institutional dialogue on its application as a comprehensive teaching philosophy.



**SMALL TEACHING: EVERYDAY LESSONS FROM THE SCIENCE OF LEARNING**  
James M. Lang  
Jossey-Bass (2016)

Written by a professor of English who specializes in teaching in higher education, this book presents an approach to “small teaching”—small but powerful shifts in how instructors design courses, conduct classes, and communicate with students—for improving student learning that can be applied by any faculty, in any classroom setting, and in any discipline. The book is organized into three sections that are core to the teaching/learning process: acquiring knowledge, developing understanding, and creating inspiration. The chapters in each section include models, principles, and practical teaching and learning techniques that met the author’s critical requirements—a foundation in the learning sciences, proven to yield positive impact in application, and practical to implement with minimal preparation and grading. The author convincingly argues that small and incremental changes in teaching strategies (not just dramatic pedagogical transformations) can have a powerful impact on student learning. A particular strength of this book is that the strategies presented apply to the diverse range of higher education instructional contexts, as well as to the workplace realities of both full-time and adjunct instructors. This is a great book and resource.



**MAKE IT STICK: THE SCIENCE OF SUCCESSFUL LEARNING**  
Peter C. Brown, Henry L. Roediger III and Mark A. McDaniel  
Belknap Press (2014)

Two cognitive scientists, Henry Roediger and Mark McDaniel, and one storyteller, Peter Brown, have teamed up to explain in a clear and understandable manner how learning for long-term retention works. Drawing on their own cognitive psychology research at Washington University, the work of other prominent scholars, and revealing personal stories from students, teachers, and coaches, the authors use storytelling to illuminate the principles that lead to highly effective learning and retention. They assert that the best learning occurs when it is based on recall applying two key principles: spaced repetition of key ideas, and the interleaving of different but related topics. Equally as valuable is the information presented on why many popular practices are not effective. The book begins with an introduction to the claims made by the authors, and ends with practical tips for students, lifelong learners, teachers, and trainers. Each of the six intervening chapters presents a learning strategy in storytelling style, highlights factors impacting its effective application, and ends with a summary of key takeaways. If you want to learn how to be a better learner, or help others learn how to be better learners, this is a must-read (assuming you can handle the repetition).



**CREATING SIGNIFICANT LEARNING EXPERIENCES, REVISED AND UPDATED: AN INTEGRATED APPROACH TO DESIGNING COLLEGE COURSES**  
L. Dee Fink  
Jossey-Bass

(Orig. ed., 2003; Updated ed., 2013)

This revised and updated edition of Fink’s 2003 book includes new research on the scholarship of teaching and learning, as well as refinements to the author’s original conceptual model on integrated course design—the central focus of which is to enhance student engagement and improve student learning. Fink sets forth a vision for teaching and learning based on three key concepts: (1) significant learning, (2) integrated course design, and (3) better organizational support. Chapter 1 presents a case for new ways of thinking about teaching and learning, the central argument being that all teaching should create significant learning experiences. Chapter 2 offers a language and taxonomy for identifying what constitutes significant learning experiences. Chapters 3-5 address how to design and create more powerful learning experiences based on an integrated course design model, and incorporate a step-by-step guide and tools for its application. Chapter 6 identifies the critical conditions needed to support faculty development within an institutional context, as well as by external organizations that support effective teaching and learning. In the final chapter, the author offers a new metaphor for describing his vision for teaching - that being, “the teacher-as-helmsman”, as well as associated guiding principles.

RATING ★★

RATING ★★★

RATING ★★½

RATING ★★★

RATING | ★★★ HATS OFF | ★★ THUMBS UP | ★ SO-SO

# AUTHOR'S VOICE *Small Teaching: Everyday Lessons from the Science of Learning*

# JAMES M. LANG

Each *Leadership* issue includes a section on “The Literature of Leadership” in which short reviews are presented on select books of topical relevance. A number of criteria are considered in selecting which books to review, such as the relevance of the book to the thematic focus of the specific journal edition, reputation/significance of the author in the field, critical reviews from various reputable sources, and potential interest to our readership. In order to create an opportunity for the author(s) of one (or more) of the books on our “highly recommended” reading list to contribute their extraordinary insights and perspectives for the benefit of our readers, we are introducing “Author’s Voice”.

In this issue of *Leadership*, James M. Lang, author of ***Small Teaching: Everyday Lessons from the Science of Learning***, shares his thoughts in response to five focused questions about his book.

1. In *Small Teaching*, numerous scholarly works from the learning sciences are cited that were foundational to the models, principles, strategies, and practices presented. What two or three authors and/or scholarly works inspired your thinking on small teaching the most, and why?

The first and most important book for any teacher to read, for me, would be *Make It Stick: The Science of Successful Learning*. This book was authored by two learning scientists who teamed up with a novelist to help them present the most recent research we have about learning in friendly, readable prose. They do an excellent job of dispelling myths about learning (such as the notion that we have to teach to student “learning styles”) and instead present scientifically validated research about the learning process. They don’t explicitly address the book to teachers, but teachers are in the business of helping people learn, and so will benefit enormously from their research. Anyone who plays a role in the educational enterprise, including staff and administrators, will benefit likewise from the book.

The other two books that have been essential for my thinking about small teaching have been specifically addressed to teachers. *How Learning Works: Seven Research-Based Principles for Smart Teaching* focuses on teaching and learning in higher education, and delivers exactly what it promises. A careful reading of this book will yield many new ideas and strategies for college faculty. Daniel Willingham’s book *Why Don’t Students Like School?* actually focuses on teachers in the K-12 context, but I found this book every bit as informative and helpful as any book I have read in teaching and learning in higher education. A cognitive scientist, Willingham presents a comprehensive account of the gap that often arises between our learning brains and the school environment. Plenty of the recommendations he makes for teachers will apply to college faculty as well.

2. The central thesis of your book is that small and incremental changes in teaching strategies (not just dramatic pedagogical transformations) can powerfully impact student learning. The book is organized into three sections that are core to the teaching/learning process: acquiring knowledge, developing understanding, and creating inspiration. What was your favorite section (or chapter) to write, and why?

The easiest sections to write were the first three chapters, which focused on how we help students learn and retain something new. These chapters really delve into the mechanics of learning, and we have such a tremendous amount of new research in this area that it was a pleasure to read it and synthesize it for college faculty. The subject matter of these chapters—such as retrieval and interleaving—also lends itself very well to small changes to the college classroom.

But I suppose I learned the most from writing the chapter about motivation, which really proved a challenge for me. It’s easy enough to imagine how you can use a five-minute activity at the end of class to help students better remember and use what they have learned in that class period. The challenge of small teaching becomes much more complex when you have to envision how such small-scale interventions might make a difference to the motivation of your students. So when I first thought about writing a chapter on motivation, I honestly wasn’t sure whether I was going to find enough ideas that would fit into the frame of small teaching. As a result, searching for and creating the recommendations in that chapter became an interesting and creative process for me, and may have ultimately changed my own teaching more than any other chapter. I see now how some small ways of framing or re-framing courses, or communication with students, or providing feedback on their work, can play a major part in motivating them to learn.

3. The small teaching techniques presented in your book include brief (5-10 minute) classroom or online learning activities, one-time interventions, and small modifications in course design and communication with students that can be applied by any faculty, in any discipline, and in any institutional setting. Based on the evidentiary findings from your research and experience, which (if any) of the “small teachings” (a) have had the most positive impact on students? and (b) have been identified by teachers as having the most positive impact in their teaching/classroom environment?

For the first six months of 2016, I wrote a series of six columns for the *Chronicle of Higher Education* that made a parallel case for a “small teaching” approach to improve teaching and learning in higher education. The two most popular of

those columns focused on strategies that teachers could use in the opening and closing minutes of class to better prepare their students for learning and help them deepen the learning from that class period. Those two columns seemed to strike a chord with faculty because they offered easy-to-implement recommendations that would work in any type of teaching environment, whether people were lecturing or holding discussions or using team-based learning. I know lots of faculty read here and there about new teaching strategies, or attend lectures or workshops on how to improve their teaching, but they often have trouble envisioning how to translate what they are reading or hearing into their classrooms the next morning. Those columns gave people a very easy entry point for making a quick, positive change to their students' learning.

I have had the opportunity to give a number of keynote speeches and workshops for faculty on small teaching since the publication of the book, and I find there as well that recommendations for opening and closing classroom activities seem to elicit the most immediate and positive response. I am actually glad to see this, because I do believe that the opening and closing minutes of a learning period have enormous potential to make a positive difference for students. Too often we slide into the class period hemming and hawing our way into the lesson and we end by rushing to squeeze in a few more points while students are packing their bags. But lots of interesting learning experiments have shown how quick engagement activities at the start and close of class really can have a powerful, positive impact on students. Faculty have responded very well to this argument—and it has definitely influenced my own teaching as well, since I now think much more deliberately about those key moments in my own classes.

4. In the introductory section, you indicated some strategies that seemed plausible were actually not sufficiently supported by research to include in the book (p. 7). What were the greatest surprises (both positive and negative) that you encountered in writing this book, and why?

The greatest surprise was simply that the premise of small teaching was supported by the research! Before I started writing the book I became interested in the prospect that small changes to teaching could make a big difference, but at that time I had more hunches than solid evidence in my corner. I have had the opportunity to work with faculty on more than seventy-five campuses around the world, giving workshops on teaching, and found over the years that they liked receiving concrete, practical suggestions for strategies that they could implement in their teaching immediately. So that set me to wondering how many such strategies I could find in the literature. I try to stay abreast of that literature, but once I had the idea of small teaching in mind I went back through it with fresh eyes, looking for examples of small changes that could make a big difference—and I found many of them, more than I would have imagined. So that was probably the most pleasant surprise of this whole process.

On the negative side, the book had two additional projected chapters that didn't ultimately survive the planning and drafting stages. One of those I still find potentially fascinating—the notion that physical movement and activity can boost our cognitive function. We do have solid scientific evidence for this, and most

of us probably know it from experience as well. After we take a run or a hike or swim our minds feel sharp and clear, and we get great new ideas. It seemed to me that if we do know this, we should find some way to allow it to help our students learn. But I just couldn't find enough concrete strategies to recommend to faculty that involved physical activity. Certainly we can ask them to get up from their seats, move into groups, or we can take them on field trips, or we can have things like gallery walks in the classroom that get them out of their seats and moving. But in the end this just seemed insufficient to sustain a full chapter. I continue to think about it, though, and perhaps it will end up in a future column for the *Chronicle of Higher Education*.

5. In a recent article in *The Chronicle of Higher Education* titled, "Small Changes or Big Revolutions?" (June 19, 2016), you argue that "[T]he revolution, if it ever occurs, won't begin with faculty members reinventing higher education from scratch; it will begin when we focus on revolutionizing the first five minutes of class, on seeking new ways to help students make connections, or on giving our students more control of their own learning." For institutions seeking to leverage small teaching principles in bringing about broader campus-wide reforms in teaching philosophy and pedagogy, what are the key messages or takeaways from your book to be considered?

The campus teaching and learning center represents, for me, the best potential source for implementing small teaching changes on campus. Centers can host discussions or workshops in which faculty work together to identify the most difficult challenges they face in their teaching, and then use the small teaching framework to see whether or not they can devise solutions to those challenges that are manageable and available to everyone. The ideas in the book are really designed as discussion starters, which should inspire faculty to create their own small teaching innovations that address their particular classroom challenges and opportunities.

I know of many examples of teaching centers that are using *Small Teaching* in a faculty book club format, reading the book and then meeting to discuss how they can translate the approach to their campus. I am happy to help support and work with teaching centers, administrators, or faculty who want to try something like this; folks can reach out to me any time at lang@assumption.edu.

#### ABOUT THE AUTHOR



James M. Lang is a Professor of English and the Director of the Center for Teaching Excellence at Assumption College in Worcester, MA. He is the author of five books, the most recent of which are *Small Teaching: Everyday Lessons from the Science of Learning* (Jossey-Bass, 2016), *Cheating Lessons: Learning from Academic Dishonesty* (Harvard University Press, 2013), and *On Course: A Week-by-Week Guide to Your First Semester of College Teaching* (Harvard UP, 2008). Lang writes a monthly column on teaching and learning for *The Chronicle of Higher Education*, and edits the *Teaching and Learning in Higher Education* book series from West Virginia University Press. He has conducted workshops on teaching for faculty at more than seventy-five colleges or universities in the U.S. and abroad.

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