



# ANNUAL REPORT 2015

College of Veterinary Medicine

**Teaching  
Academy**



Washington State University

*Making Teaching Matter*

# Making Teaching Matter!

## 2015 Highlights:

- Teaching Academy Influence
- Initiatives
- Learning Communities
- Invited Guest Speakers
- Brown Bag Presentations & Discussions
- Summer Book Club
- Educational Research Grants
- Travel to National Meetings
- Publications & Awards
- Membership



## Letter From the Director

As with previous reports, I think this 2015 Annual Report does a good job of capturing our activities from the past year. For example, on page 3, you can view data showing that the CVM Teaching Academy sponsored or co-sponsored **almost 90 events last year**. These ranged from invited speakers and “brown bag” discussions to smaller TA Learning Community and summer book club gatherings. We also participated in 16 candidate interviews. In addition, the figures document the number of people from all over campus who have been “touched” by our work. **289 individuals attended at least one CVM TA event in 2015, and total attendance exceeded 1200**. An increasing number of attendees were colleagues from other colleges.

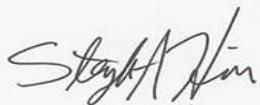
One explicit goal of our academy is developing an ongoing culture of exploration (notably of evidence based teaching practices) and experimentation. Our activities, notably those in the area of professional development, are intended to provide specific tools, help instructors build a firm foundational knowledge of how learning works, and (very importantly) build a network of support – i.e. a community of practice. We hope to move teaching from a professional activity that in the past was mostly done in isolation to one that is done publically, collaboratively, and with peer review and coaching. As I’ve said many times, we seek to make our teaching look more like our research, where we are always looking for the next big idea – a place where great ideas and data rule, and where healthy debate and dialogue are the norm. For those of us who have been willing and able to engage in the Teaching Academy, I think these goals are being realized – albeit slowly. If nothing else, we are creating a group of reflective practitioners. These folks are probably the best hope for innovation and change in our college. Their work is extending into our wider university community as well.

I recently organized a series of focus group meetings with pre-promotion junior faculty in the CVM – both basic scientists and clinicians. It seems very clear that if the Academy is serious about our goal to “Make Teaching Matter”, we need to do more to directly address the needs of this constituency. It struck me that we’ve probably been spending too much time “*preaching to the choir,*” and not enough working to “*get more folks into the church.*” If we expect to sustain a movement by which teaching is valued and rewarded, we need some change as the Academy matures.

## Letter from the Director (continued)

We need to provide more focused mentoring and coaching to new or newish educators, and we need more professional development that is targeted to this stage of their careers. It's too easy for the rest of us to forget how much we've learned through years of experience and overlook the basic needs of someone who is entering the classroom, teaching lab, or teaching hospital for the first time. These young faculty members represent the future – of higher education, our college, and the CVM TA. If we believe in our mission, we need to work harder on their behalf. This includes doing more to change the incentives and rewards system so it better supports their teaching efforts. I hope you will think about this and join me in redirecting some of our work in this direction.

Finally, it's time again to say many thanks. If you've come to even a single CVM TA event, thank you for joining in. We hope you found it welcoming and useful. If you've come to multiple functions, a special thanks. We understand that you are working hard and your time is precious. Please let us know what we can do to make the CVM TA work better for you. If you're someone who's actively engaged with TA members and guests, and especially if you've taken the lead on even one project or initiative, we can't thank you enough. We will need more of this kind of involvement if we are to change the paradigm regarding teaching and learning. As always, targeted thanks goes to Rachel Halsey, without whom the Academy would be a shadow of what it has become. Likewise, a heartfelt thank you to our colleague and friend Phil Mixer, who stepped in as Acting Director while I was away on medical leave this past year. Thank you yet again to our Dean Bryan Slinker who supported us at the beginning and continues to be one of our biggest fans. To Bryan, TA members, and all those in the greater college: I hope the CVM TA is meeting your expectations and making you proud.



Stephen A. Hines, DVM, PhD., DACVP  
Director, CVM Teaching Academy  
Professor of Veterinary Microbiology & Pathology



*Making Teaching Matter*

## Goals

- Improve the quality of teaching and learning in the DVM and undergraduate teaching programs through faculty development, communication, collaboration, and scholarship.
- **Foster and support experimentation** in the DVM and undergraduate curricula.
- **Create and sustain an environment of collegiality, collaboration, and open dialogue** - a place where ideas are freely expressed, openly discussed, and debated respectfully.

By promotion scholarship, education leadership, and collaboration -

- **Elevate the status of teaching** - especially for those who have large teaching appointments,
- **Re-define "excellence in teaching"** to extend beyond student teaching evaluations
- **Coordinate a "critical mass" of CVM faculty** dedicated to and focused on the CVM's teaching mission
- Provide a substantive means by which faculty may be **promoted and/or granted tenure** based on teaching.

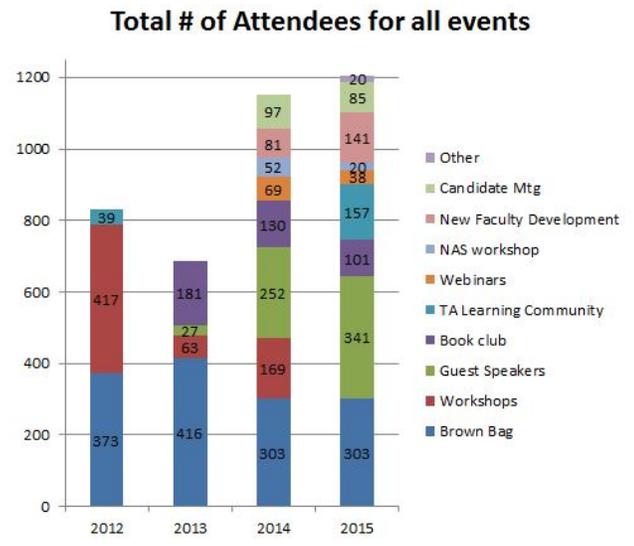
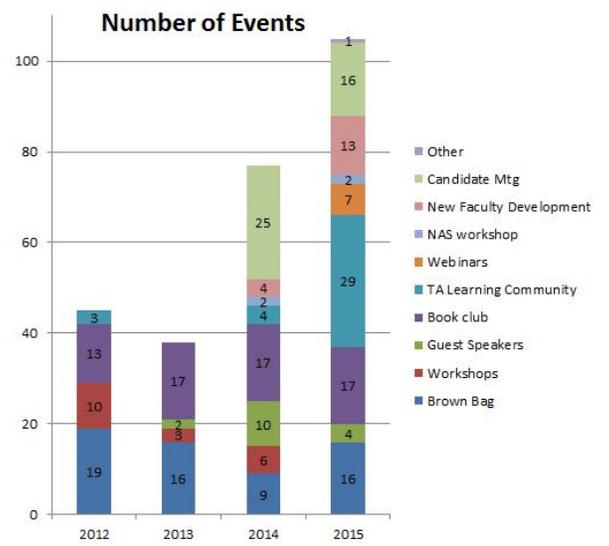
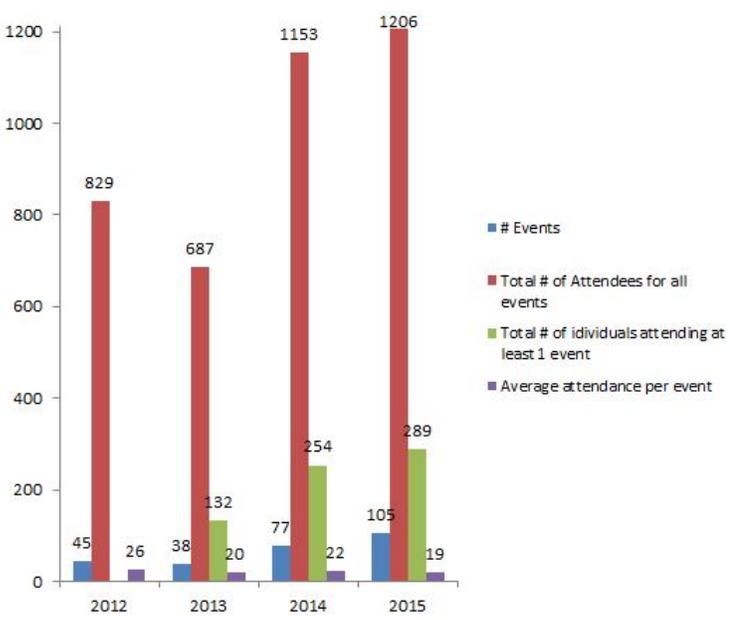


# CVM Teaching Academy Influence:

Over the past 4 years, the CVM Teaching Academy has evolved and grown to provide a wide range of opportunities focused on making teaching matter. Ranging from large professional development workshops to small group meetings, the CVM Teaching Academy provides those participating with a diverse menu of common objectives, activities and interests. Participant attendance at these various opportunities has continued to grow significantly, aiding instructors' development to meet the needs of the ever-changing world of higher education.

## CVM Teaching Academy Attendance:

*(Individual attendance data for 2012 was not available)*



The CVM Teaching Academy has impacted our college and campus both directly and indirectly with our efforts to make teaching matter

# CVM Teaching Academy Initiatives

The Teaching Academy continues to grow & strive to meet the needs of the members & the college. The 3 initiatives developed two years ago, & the new one developed last year, continue to evolve & increase in momentum as they develop into programs that will be beneficial.

- **Assessment of Teaching Effectiveness:** Peer Observation of Teaching Program
- **Faculty Development & Mentoring:** A mentoring/training program for junior faculty.
- **Curriculum (DVM):** Clinical Skills & Simulation (*clinical skills lab & integrated program*)
- **Veterinary Technician Professional Development**

## Peer Observation of Teaching Program:

*Co-Leaders: Phil Mixter, PhD & Suzanne Kurtz, PhD*

Opening a process to enhance both teaching and curriculum development within the CVM, encouraging innovation, and leading to more effective assessment of teaching progress

**Background:** A primary goal of the WSU CVM Teaching Academy initiative for Peer Observation of Teaching is to develop a culture of teaching improvement within our college. This culture would welcome peer observations and interactions, individualize faculty development of instruction, support educational innovations, and generate community-wide conversations about best teaching practices.

The evaluation of teaching in the WSU CVM is currently limited. These processes:

- do not provide sufficient formative input to improve an individual's teaching effectiveness
- do not support experimentation and innovation (risk taking),
- do not stimulate sharing of teaching experiences or otherwise create a comfortable environment for exploring new teaching practices,
- and do not provide complete and balanced summative feedback, as is needed for annual review and promotion portfolios

**Overview:** After an initial phase of recruitment, a spectrum of current faculty, tenured and non-tenured, are being trained to observe, discuss and actively reflect with CVM instructional faculty. This will provide constructive interactions with a group of at least three trained faculty following observations of the individuals' teaching activities (including lectures, laboratories and clinical instruction). The interactive process follows transparent guidelines. Interactions will be designed to offer relevant and insightful opportunities for reflection by the instructor, and to provide an alternative source of formative and summative evaluations to department chairs and promotion committees.

### 2015 Accomplishments:

1. Oversight committee - Rachel Halsey, Steve Hines, Suzanne Kurtz, Phil Mixter, Russ Tucker (chair) developed a coherent pilot program for engaging in peer observation and discussion of teaching relevant to all teaching contexts (lectures, rounds, clinic or stall-side and other teaching in clinical contexts, one-on-one or small group mentoring and teaching, etc.) – for the program after consultation with the Dean, Department Heads, and various colleagues. In the spring semester, a shortened training program allowed more coaches to be trained and participate.
  - a. Training session in April 2015 added 4 coaches to the existing pool using a different training model.
  - b. Several moved to participate as coaches within weeks of their training
  - c. Discussions about the optimal training model are ongoing. Other programs feel a “refresher” session is needed to recalibrate coaches from time to time.



2. A single instructor participated in coaching during the year. While more instructors expressed interest, limited time in turn limited the coaching that could occur. (See goals for 2016)
3. Russ Tucker retired in 2015 and this program is one of his many lasting accomplishments. He played a critical role in the leadership during the development of this program, tirelessly attended departmental meetings and shepherded this group forward. We salute him for his energy and enthusiasm with our thanks and gratitude.

### Future Goals:

1. Spring 2016:
  - a. Continue piloting with several faculty members, training coaches in this process through entire process, including written summaries
  - b. Pilots will emphasize clinical teaching and coaching of established instructors as well as those beginning their teaching
  - c. Use feedback from all involved in process to assess, reflect and adapt process for sustainability and increased future throughput, modifying documentation as needed; Focus will be on both the coaches' and the instructors' perspectives
  - d. Bring Susan Matthew (VCS) into the oversight committee
2. Summer 2016:
  - a. Invite new coaches into adapted training process
  - b. Recruit faculty members to enter coaching in the fall 2016 and identify new hires beginning this process
  - c. Reflect on pilots and process, systematically reviewing literature on similar programs
  - d. Consider assessment options further
3. Fall 2016:
  - a. Start evolved process with faculty participants, including those needing feedback in their milestone review materials (third year, tenure and promotion, etc.) and new hires
  - b. Begin to collect assessment data with the intent on publishing about this initiative

## Mentoring/Training Program for Junior Faculty:

*Co-Chairs: Samantha Gizerian, PhD & George Barrington, DVM*

**Background:** Although teaching is a component of the job of almost every member of the faculty, very few ever get actual instruction in teaching. We typically teach as we were taught, without much thought as to why or whether this works. Over time, seasoned instructors learn from their students what works in class, and what doesn't, but this process often takes an entire career. Moreover, a broad literature of scholarship of teaching and learning has been developed over the last few decades demonstrating a variety of "best practices" for classroom and clinical teaching, making it possible for instructors to evaluate the outcomes of different pedagogical techniques. The CVM TA New Faculty Development Initiative will draw on these resources as well as the expertise of long-time instructors to help new or less experienced faculty improve and incorporate new techniques and strategies into their teaching as early in their career as possible.

**Goal:** The goal of the New Faculty Development Initiative is to develop a sustainable program that supports new teachers as they begin to gain experience in teaching.

**Overview:** The initiative will provide a modular series of activities that new teachers in the CVM can participate in as needed. All activities will be open to the entire Teaching Academy, though each event will focus on a topic that is likely to be of the most interest to a new or more inexperienced instructor. All activities will focus on either the resources available to faculty members within WSU and the CVM, the day-to-day activities of teaching, alternate (not lecture based) pedagogical strategies, and the science of teaching and learning.



Blackboard

Scientific Teaching

Jo Handelsman Sarah Miller Christine Lund



The National Program for Scientific Teaching

www.scientificteaching.org

## Accomplishments:

1. **March 27, 2015:** (24 in attendance) Drs. John Nilson & Kay Brothers lead the Scientific Teaching Workshop Series: Scientific Teaching includes active learning that helps you too!
2. **April 10, 2015:** (11 in attendance) Scientific Teaching Workshop Series: Scientific Teaching includes active learning that helps you too!
3. **April 24, 2015:** (10 in attendance total) Drs. John Nilson & Kay Brothers lead the Scientific Teaching Workshop Series: Assessment complete. Now what?
4. **May 15, 2015 :** (5 in attendance total) Drs. John Nilson & Kay Brothers lead the Scientific Teaching Workshop Series: Diversity affects learning
5. **June 10, 2015:** (20 in attendance total) Chris Lindberg led the B5: Blackboard Training Workshop Series
6. **June 24, 2015:** (16 in attendance total) Chris Lindberg led the B5: Blackboard Training Workshop Series
7. **July 8, 2015:** (11 in attendance total) Chris Lindberg led the B5: Assessments 1: Building and Deploying Exams, incl. Importing Test Questions
8. **July 22, 2015:** (12 in attendance total) Chris Lindberg led the B5: Assessments 2: Deploying Exams (cont.), Item Analyses and Grade Center
9. **July 30, 2015:** (7 in attendance total) Chris Lindberg led the B5: Grade Center: Grades & Grading Columns
10. **Aug 19, 2015:** (10 in attendance total) Chris Lindberg led the B5: Assessments 3: Exam writing
11. **Sept 17, 2015:** (7 in attendance total) Chris Lindberg led a presentation on Exam Building in Blackboard
12. **Sept 21, 2015:** (4 in attendance total) Chris Lindberg led a presentation on Exam Deployment in Blackboard
13. **Oct 2, 2015:** (4 in attendance total) Chris Lindberg led a presentation on Exam Building And Deployment in Blackboard
14. **Ongoing:** A comprehensive website with links to various teaching resources and a CVM-specific FAQ section is currently under development.

## Future Goals:

Activities being planned for 2016:

- January 2016: Focus Groups with junior faculty to determine what their needs are
- April 2016: Panel Discussion on documenting your teaching activities for Annual Review

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## CVM Clinical Simulation Center:

*Board of Directors: Lethea Russell, LVT Coordinator; Rob Keegan, DVM; Matt Mickas, DVM; Tandi Ngwenyama, DVM; Linda Martin, DVM; Lynne Nelson, DVM; Rachel Jensen, LVT; & Julie Cary, DVM, Director.*

**Mission:** To provide a positive, enriching, and supportive educational environment for members of the veterinary profession at all levels of training.

**Vision:** To advance technical and clinical knowledge and skill through low and high fidelity simulation for students, staff, interns, residents, and practitioners in order to enhance the care provided to our veterinary patients now and in the future.

### Goals:

1. Provide students with the opportunity to be the most highly trained, technically skilled, confident, and marketable graduates in the country.
2. Provide an educational environment for the benefit of students, house officers, and other trainees.
3. Encourage innovation in veterinary medical education.
4. Serve as a catalyst for greater integrated learning efforts.
5. Develop and implement research related to optimizing technical and clinical skill proficiency.
6. Encourage collaborative educational program development and research projects.
7. Provide facilities and staffing for formative and summative assessment events.
8. Advance understanding of the benefit of simulation for teaching and the practice of veterinary medicine.

## **Accomplishments To-date and Future Objectives:**

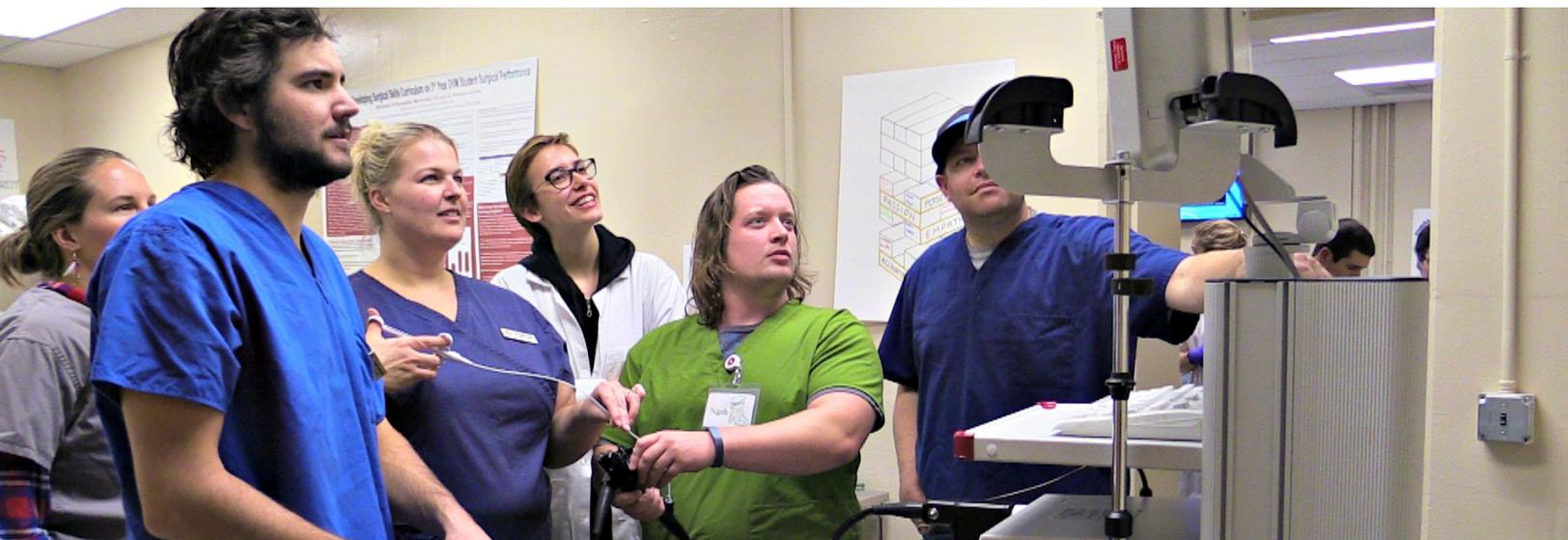
1. Successfully hosted 90+ labs since July 2015.
2. Supported learning of an estimated 3000 lab participants since July of 2015.
3. Student-led research: Two manuscripts accepted, one manuscript in review, two projects conducted, and one poster presentation.
4. Purchased and implemented several high level teaching models.
  - a. Equine palpation/Colic Simulator (VSI); Bovine Dystocia Simulator (VSI); Critical care Jerry/emergency room training manikin (RC); K-9 Breath and Heart sound simulator (RC) ; K-9 Intubation, IV catheter, Urinary catheter manikins (FF); Equine IV catheter manikin (SP)
5. Cash donation to Clinical Simulation Center (full endoscopy tower purchased with funds)

## **Current Instructional Activities:**

1. Principles of Surgery laboratory curriculum.
2. Second year for 3rd year introduction to clinics being with 4 hours of clinical skills practice each semester. Implemented electronic student log-in system.
3. Optional Clinical Skills Laboratories (OCSL) are continuing as a way to support and augment training happening within the curriculum in an individualized format.
  - a. Expand student exposure to patterns and knots routinely used in practice that are not formally taught in the curriculum (Millers knot, Utrecht suture pattern).
  - b. Practice surgical procedures and approaches discussed in class.
  - c. Repeat nerve block and IV catheterization practice from anesthesia.
  - d. Continue working to facilitate integrative simulation (Euthanasia labs with simulated clients Spring 2016 and 2017).
4. Experiential introduction to Anesthesia for Junior Surgery lab.
5. Production and editing of student instructional videos.
6. Contribute to 4th year rotation instruction on an as-needed basis.

## **Potential Future Instructional Activities:**

1. Continue to develop modules to support instruction on 4th year rotations.
2. Provide reporting capability for students using OCSL to advanced training as a marketing opportunity for job searches (ie, report how many hours and what skills developed).
3. Implementing simulation into “Applied Clinical Anesthesia” Course Spring 2016.
4. Ongoing engagement and collaboration with DVM instructors to identify priorities for models and equipment for purchase in 2015 and 2016.
5. Training of faculty and staff in simulation with other healthcare providers (IMSH, San Diego 1/2016, The Institute or Boise Spring conference 2016).



# Veterinary Technician Professional Development:

**Board of Directors:** Rene Scalf (Chair), Denise Waiting, Nicole Valdez, Lethea Russell, Linda Martin, and Kasey Burton

**Mission:** To facilitate the growth and expansion of the teaching skills among the veterinary technicians at the Veterinary Teaching Hospital with the end goal of lifting our professional veterinary students up higher in their educational endeavors.

**Background:** In keeping with the overall mission of the Teaching Academy, this initiative was developed to enhance the VTH Veterinary Technician staff teaching skills through increased resources and education. It has been acknowledged that a significant portion of the 4th year veterinary student's time is spent working side by side in the clinical setting with veterinary technicians. It is further recognized that the veterinary technician staff brings a significant knowledge base to be shared with the veterinary students. However, very few Licensed Veterinary Technicians have also been trained formally in education and teaching practices. This initiative will help meet the Academy's goal of improving the professional lives of both the staff and the students involved with the Washington State University College of Veterinary Medicine by providing guidance through educational seminars and workshops, reading materials and other similar activities to further the teaching skill set for this group of individuals.

## Overview and Initial Goals:

The initial phase of this initiative involved identifying the ultimate goal. The ultimate goal was defined to be to develop a veterinary technician staff that would be considered elite teachers in their field. It was decided that we would likely need to break down the process into pieces and explain each piece to work towards recognizing and raising technician confidence and competence in teaching the veterinary students. Several identified steps that will need to be addressed include giving effective feedback, dealing with emotional responses, understanding student responses to teaching delivery, mastering verbal and non-verbal communication while teaching, and ensuring an understanding of the subject being taught.

## 2015 Accomplishments:

- Technician Teaching Award - recognized 3 individuals in 2015 - first year.
- March 3, 2014 - Initial meeting of the Board of Directors (6 in attendance) Defined goals and brainstormed possible directions to pursue.
- March 17, 2015 – (5 in attendance) Began identifying details of a work shop for technicians on communication skills
- April 8, 2015 – (5 in attendance) Identified resources to help create the workshop
- Sept 8, 2015 – (5 in attendance) planning meeting
- Sept 10, 2015 – (3 in attendance) met with Steve Hines to update and discuss Teaching Academy involvement in the workshop
- Sept.23, 2105 – (4 in attendance) met with Julie Cary with the Simulation and Communications lab to discuss the idea of utilizing their resources for the workshop
- Oct 7, 2015 – (22 in attendance) Met with the VTH Veterinary Technicians and introduced the idea of the communications workshop and got input from the group
- Oct 8, 2015 Sent out a survey to the VTH faculty and veterinary technicians asking them about their willingness to support the communications workshop. Received responses from 61 out of 66 surveys sent out. Received overwhelming support.
- Nov 16, 2015 Presented idea and survey results at the VTH Executive Board Meeting and asked for permission to proceed with the workshop and received support in making it a mandatory workshop for all technicians.

## Future Instructional Activities:

Spring 2016 – Communications/Teaching Workshop for VTH Veterinary Technician Staff: A small group workshop covering procedure based instruction, developing skills in giving feedback, understanding student response and subsequent impact on learning, and through the use of simulation to develop and enhance technician educator skills. Other ideas still being considered for the future

1. Motivational speaker
2. Follow up workshops to build on the skills presented in the first one
3. Round table lunch discussions on different aspects of teaching



**The CVM Teaching Academy has formed interest-based Learning Communities to support implementation of best practices introduced during workshops and seminars.**

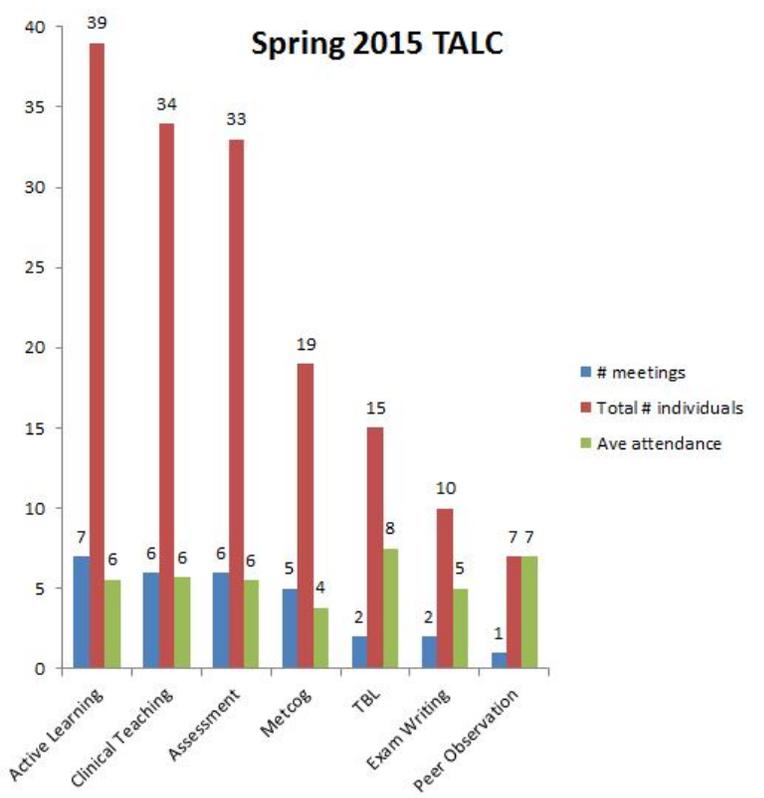
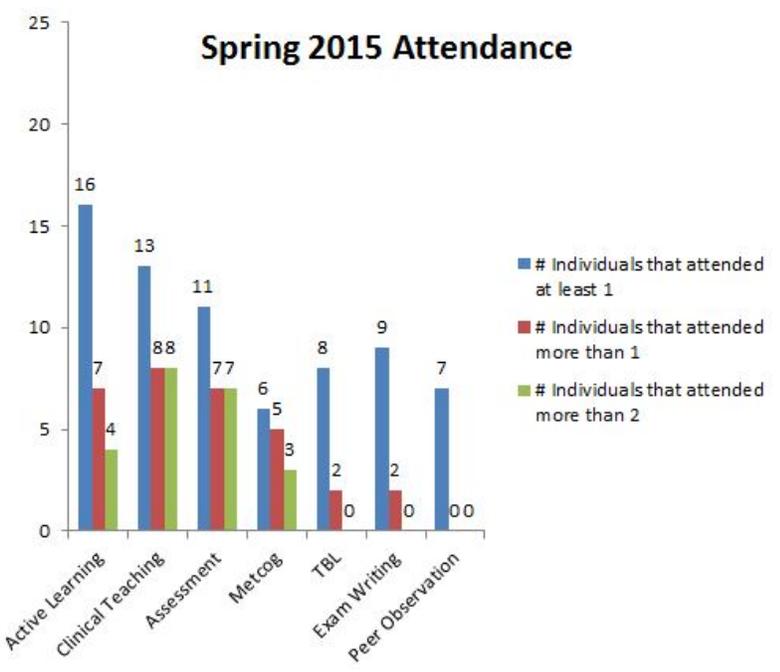
The decision behind forming these Teaching Academy Learning Communities (TALC), was to provide an environment where members that wanted to continue discussing or developing new techniques within their classrooms could meet, share ideas, or develop new concepts. These groups would be led and populated by interested members that possessed the same interests and focus.

During the Spring 2015 semester seven TALC formed, but only four continued beyond the first semester:

- Assessment and Outcome
- Active Learning
- Metacognition
- Clinical Teaching
- Team Based Learning (TBL)\*
- Exam Writing\*\*
- Peer Observation\*\*

*\*Only met 2 times, one was the initial meeting and the second the group brought in a guest speaker from campus. The plan is to continue the TBL Learning Community Spring 2016.*

*\*\*Learning communities that did not continue.*



# Assessment & Outcomes Learning Community:

*Briana Morrison, PhD  
(Chair)*

*Elizabeth Carney, PhD*

*Becky Dueben, PhD*

*Rachel Halsey, DVM;*

*Phil Mixter, PhD*

*Norah McCabe, PhD*

*Leslie Sprunger, DVM, PhD*

## ***Goals and Objectives:***

This learning community seeks 1) to identify and collate existing research and resources on assessment of learning outcomes, 2) to share what we've learned with the CVM Teaching Academy community.

## ***Accomplishments and Hurdles:***

In 2015, the Assessment Learning Community met six times. The format of meetings was primarily open discussion. We reviewed literature on best practices for learning outcome development and assessment. We discussed challenges and solutions to doing effective assessment.

The group faced several hurdles to reaching the Learning Community's goals including inconsistent attendance and difficulties in finding a common focus.

## ***Future goals/plans:***

In 2016, the Learning Community will take two new approaches.

1. Meetings will take a "topic" approach, focusing on specific assessment tools and topics.
2. Asynchronous discussions about assessment topics. The format for these discussions has not been decided.

# Active Learning Learning Community:

*Samantha Gizerian, PhD  
(Chair)*

*Steve Lampa, PhD*

*Pamela Lee, DVM,, MS,  
DACVIM*

*Chris Lindberg*

*Danielle Nelson, DVM*

## ***Goals and Objectives:***

The Active Learning TALC's goal was to investigate the various methods of active learning pedagogy and support members of the learning community as they incorporated these methods into their classrooms. The group also decided to put together a web resource for WSU CVM faculty that would identify myths and misconceptions about active learning practice, provide links to active learning practitioners in the college and provide a curated source of information about active learning techniques for WSU CVM faculty.

## ***Accomplishments and Future Plans:***

Members of the TALC met biweekly and developed a framework that would underlie the web resource. The actual website is yet to be completed. As the active learning TALC moves forward, the group will need to decide if that is still a goal to be accomplished or whether the members wish to focus more on learning about active learning.

# Metacognition Learning Community:

*William Davis, PhD (Chair)*

*Suzanne Fricke, DVM, PhD*

*Tania Perez-Jimenexz, DVM*

*Cynthia Faux, DVM*

*Scott Fricke*

*Kimberly Green, PhD*

## **Goals and Objectives:**

The Metacognition Learning Community (LC) is focused on exploring how we can get our students better prepared for, and engaged in, regulating their own learning. The learning process includes the ability to critically evaluate one's own learning styles and needs as well as understanding how to move from novice to expert thinking in a subject area. The goals of this Learning Community are: 1) to identify and collate existing resources to assist faculty interested in enhancing their students' metacognition in didactic classrooms, laboratories, and clinical settings, and 2) to identify faculty at WSU and the institutions served by the Consortium of West Region Colleges of Veterinary Medicine who are using metacognitive assessments in their classrooms. The deliverables of the Metacognition LC will be new resources for CVM Teaching Academy members that include: i) an identified network of faculty with experience working on student metacognition, and ii) an online toolkit of metacognition related resources for faculty teaching in both the CVM and broader WSU communities.

## **Accomplishments and Future Plans:**

In 2015, the TALC made progress on both goals through a series of meetings and outreach to members of the WSU and CVM educational communities to identify faculty working actively to incorporate metacognition in different instructional environments. We also explored the practical implementation of metacognition in classroom and clinical settings by reading and discussing primary literature. We will be working in 2016 to form a community of practice in the area of metacognition.

# Clinical Teaching Learning Community:

*Dharani Ajithdoss, BVSc, MVSc, PhD, DACVP,*

*DACVMB (Chair 2015)*

*Bonnie Campbell, DVM, PhD, DACVS*

*Dubra Diaz, DVM, PhD*

*Jillian Haines, DVM*

*Suzanne Kurtz, PhD*

*Pamela Lee, DVM,, MS, DACVIM (Co-Chair 2016)*

*Linda Martin, DVM, MS, DACVECC*

*Tania Perez, DVM, MS*

*Jennifer Sclovak, DVM, MS, DACVIM (Co-Chair 2016)*

*Rene Scalf, CVT, LVT*

## **Goals and Objectives:**

- The goal of the Clinical Teaching Learning Community is to develop better clinical teaching skills and learn new clinical teaching methods.
- To develop assessment techniques of clinical teaching and put those into practice.
- To determine how to make clinical teaching count towards promotion.

## **Accomplishments and Hurdles:**

During the Spring 2015, the learning community reviewed and discussed a paper written by Dr. Suzanne Kurtz "Attending Rounds: A format and techniques for improving teaching and learning." The paper provided several discussion points and potential things that could be implemented within clinic teaching. A few members experimented with the suggestions and sought feedback from the group. As the paper was being discussed, members would provide their own experience and examples.

## **Future goals/plans:**

- To continue working on the overall goals of the community
- To plan a summer workshop centered around clinical teaching and junior faculty.

# Building a Culture of Excellence in TEACHING & LEARNING

JULY 22-24, 2015

Pullman, Washington



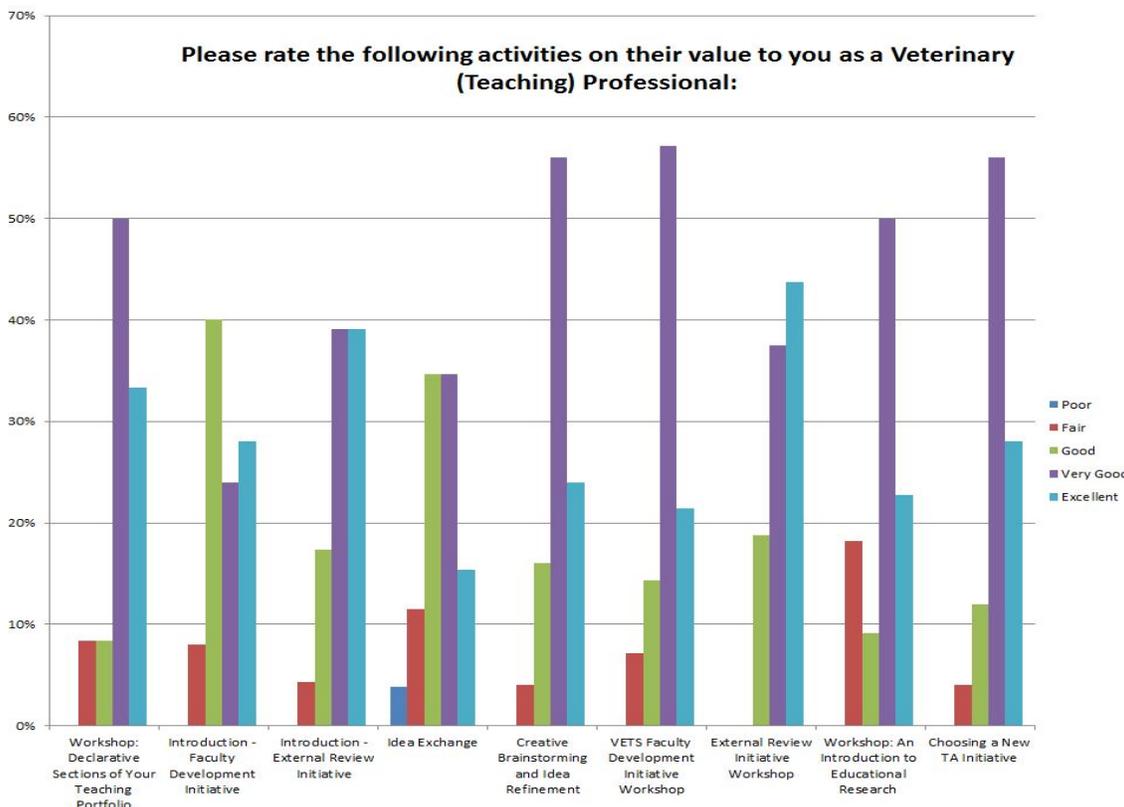
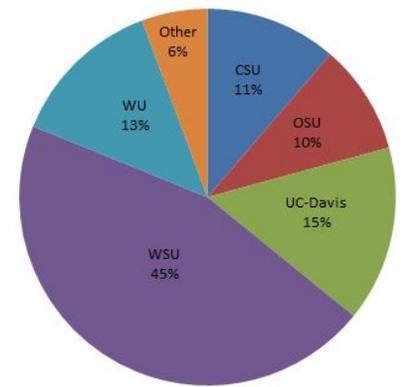
## 2015 BIENNIAL SUMMER CONFERENCE: Teaching Academy of the Consortium of West Region CVM

Washington State University College of Veterinary Medicine hosted the 2015 Biennial Summer Conference for the Teaching Academy of the Consortium of West Region Colleges of Veterinary Medicine (RTA). The consortium is made up of the five west regional CVM - Colorado State University, Oregon State University, University of California - Davis, Washington State University, and Western University of Health Sciences.

This year's conference focused on professional development, formal scholarship presentations, idea exchange to foster networking, and both formal and informal small group discussions. There were 53 attendees that took part in the conference representing all five institutions and guests from University of Washington, AVMA, and AAVMC.

For more details about the conference - <http://www.teachingacademy.westregioncvm.org/Events/index.html>

Conference Attendance (n=53)



### Conference Program Included:

- Workshop: Declarative Sections of Your Teaching Portfolio
- Introduction to Educational Research
- Initiative Introduction Presentations
- Idea Exchange
- Collaborative Brainstorming - Reaching a consensus on a new initiative.
- Scholarship Presentation



## INVITED GUEST SPEAKERS:

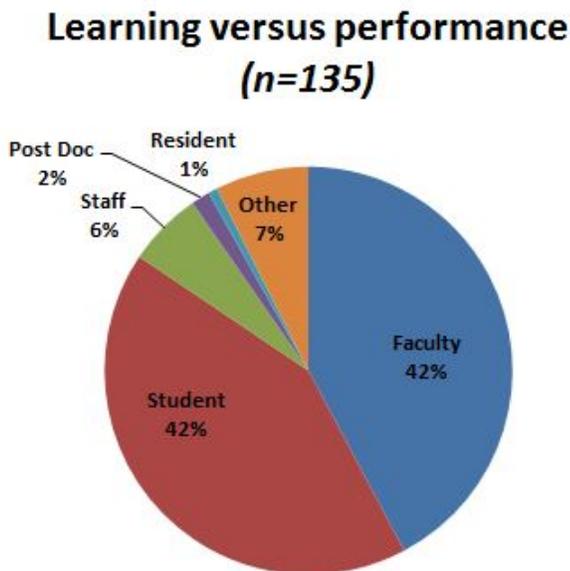
### Dr. Robert Bjork and Dr. Elizabeth Bjork

*The CVM Teaching Academy, the College of Arts and Sciences, WSU Teaching Academy, College of Education, School of Molecular Biosciences, and the Office of Undergraduate Education presented the "Bjork Seminars"*

**September 10-11, 2015**

**Dr. Robert Bjork** is a Distinguished Research Professor in the Department of Psychology at the University of California, Los Angeles. His research focuses on human learning and memory and on the implications of the science of learning for instruction and training. **Dr. Elizabeth Bjork** is a Professor of Psychology also at UCLA. Prior to joining the UCLA Psychology Department she was a faculty member in the Mathematical Psychology Laboratory at Rockefeller University in New York City and in the Psychology Department at the University of Michigan. Dr. Elizabeth Bjork's primary area of research is in human memory, particularly the role of inhibitory processes in certain types of goal-directed forgetting, such as memory updating, and in the resolution of competition in retrieval.

**Seminar: "Learning versus performance: A critical distinction in theory and practice."**  
to view recording - Presented by Dr. Robert Bjork



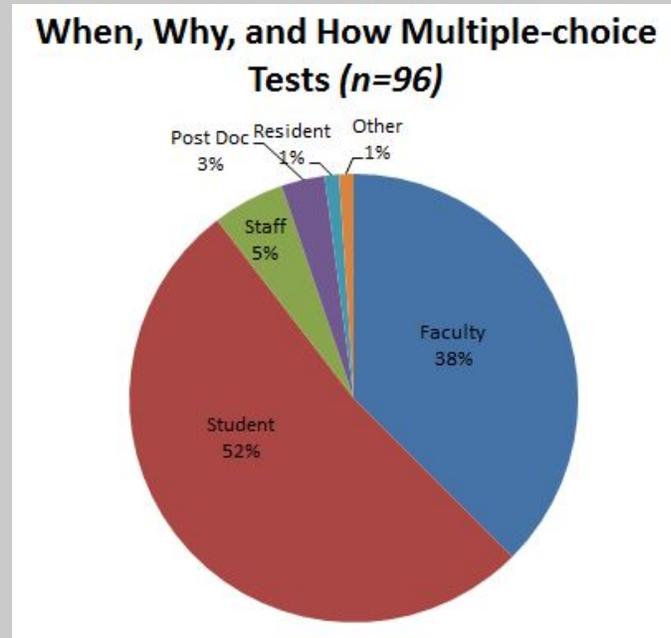
College	# Attended	%
CVM	68	50.4%
COE	23	17%
CAS	20	14.8%
ATL	2	1.5%
CAHNRS	1	0.7%
Business	1	0.7%
Global	1	0.7%
Unknown*	8	5.9%
Other	2	1.5%
Videoconference**	9	6.7%
<b>TOTAL:</b>	<b>135</b>	

\*Did not sign in; \*\*Spokane, Vancouver, Tri-Cities

**Seminar:** "When, Why, and How Multiple-choice Tests Can Serve as Tools for Learning: Evidence from the Laboratory and the Classroom." to view recording - Presented by Dr. Elizabeth Bjork

College	# Attended	%
CVM	21	21.9%
COE	9	9.4%
CAS	31	32.3%
ATL	3	3.1%
CAHNRS	3	3.1%
Unknown*	5	5.2%
Other	2	2.1%
Videoconference**	22	22.9%
<b>TOTAL:</b>	<b>96</b>	

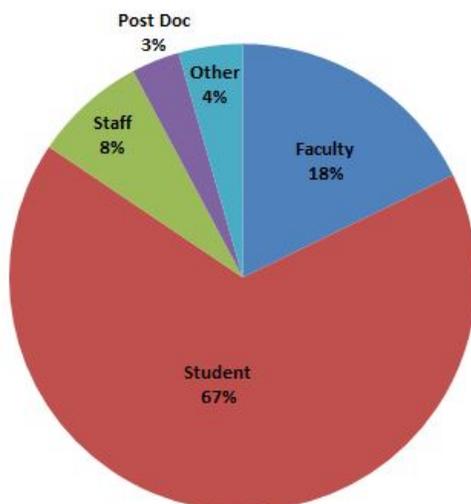
\*Did not sign in; \*\*Spokane, Vancouver, & Tri-Cities Campus



**"As we use our memories the things we recall become more recallable" ~ Dr. Robert Bjork**

**Seminar:** "The increasing importance of knowing how to learn—and some evidence that we tend not to know already." to view recording - Presented by Dr. Robert Bjork

**The increasing importance of knowing how to learn (n=90)**



College	# Attended	%
CVM	13	14.4%
COE	3	3.3%
CAS	4	4.4%
CAHNRS	2	2.2%
Business	3	3.3%
Engineering	3	3.3%
Other*	62	68.9%
<b>TOTAL:</b>	<b>90</b>	

\*Just indicated "Student" no college listed

# Discussions & Webinars

## Brown Bag Discussion & Book Club

Brown bag informal discussions are designed to explore and disseminate best practices - helping educators teach students effectively and efficiently in both classroom and clinical environment. Brown bags also include a CVM "Book Club" with a goal to cooperatively explore current literature on teaching and learning, disseminate knowledge and new ideas to teaching faculty, and thereby foster experimentation and innovation in the curriculum.

### Brown Bag Discussions:

- There were 17 discussions (8 -Spring; 3-Summer; 6-Fall)
- Average attendance for 2015 = 19 people
  - Our largest attended presentation was 32 people
  - Average TA membership attendance = 13 (19% of membership)
  - Average attendance of non-TA members= 5
- A few presentations were video conferenced with the Spokane campus

### Faculty Development Sessions:

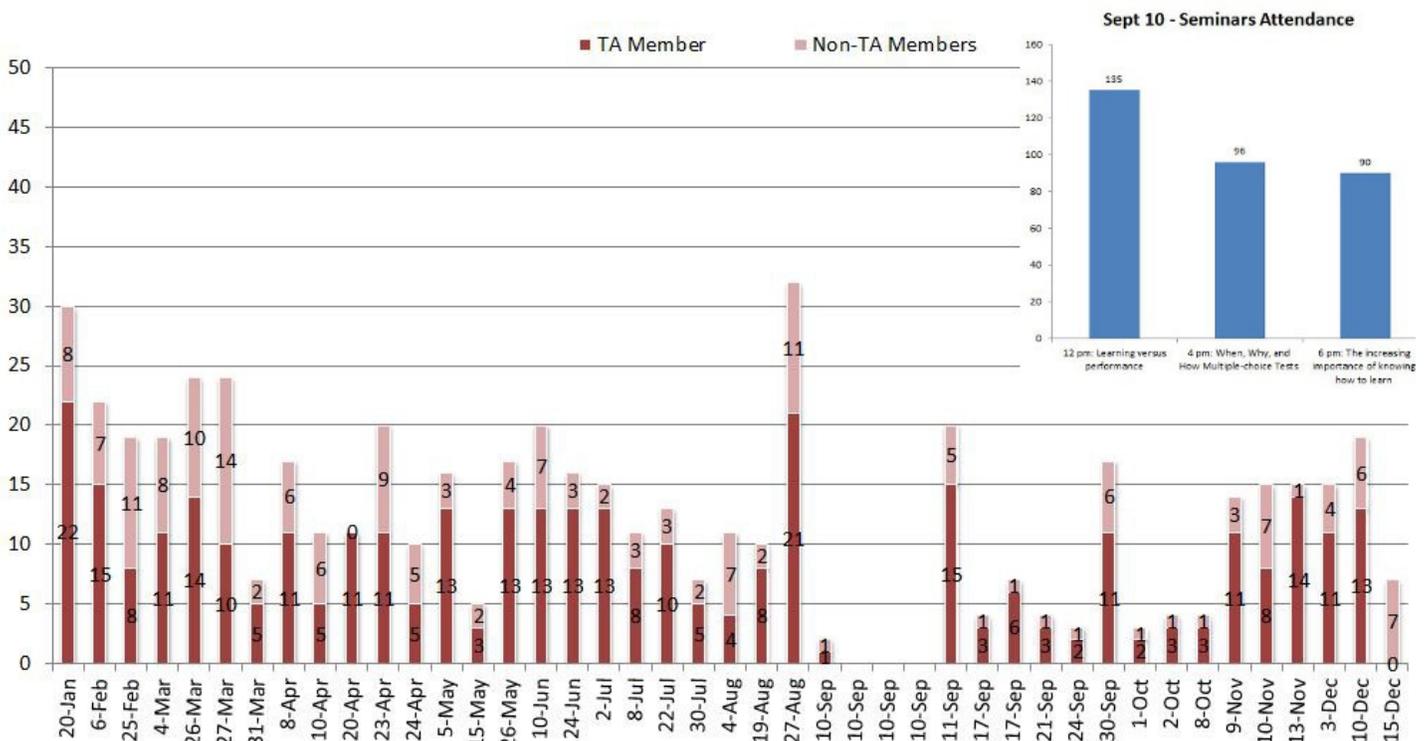
- There were 13 sessions (141 total attendance; average attendance of 11)
  - 4- Scientific Teaching Workshop Series
  - 11 - Blackboard training workshops
- Total Attendance was 38 (average 5)

### Summer Book Club:

- There were 17 sessions
  - 101 total attendance; average attendance of 11
- 33 people in total participated, 9 of those were new to the book club (27.3%)

### Webinar:

- Hosted 7 webinars in the Fall Semester
- Total Attendance was 38 (average 5)



# Brown Bag Discussion Included:

## Town Hall Meeting & Open Forum

- Tuesday, January 20, 2015 - *Drs. Steve Hines, DVM, PhD, DACVP & Phil Mixter, PhD*
- **Description:** The open forum was focused around two main questions: what the Teaching Academy has done up to this point and where do we go now? The idea of Learning Communities was discussed

## Learning Communities Forum

- Friday, February 6, 2015 - *Dr. Phil Mixter, PhD*
- **Description:** During our Town Hall meeting, a new approach to making teaching matter was introduced - known as **Learning Communities**. These small learning communities will be driven by members who gather with common interests and work towards consensus goals. To aid the formation of the learning communities, this forum was designed for interested members to find a community that interests them and begin discussing future goals

## Lessons from the FUN Workshop: Using the CREATE method to bring primary literature into the classroom

- Wednesday, February 25, 2015 - *Dr. Samantha Gizerian, PhD*
- **Description:** The CREATE method (Consider, Read, Elucidate hypotheses, Analyze and interpret data, and Think of the next Experiment; Hoskins, 2008) focuses on primary literature as a tool to teach both the facts and method of science. Students in CREATE classes read a set sequential papers produced from the same lab, and use a unique combination of pedagogical strategies to explore content and examine how a research project evolves over a period of years.

## How to increase the completion of teaching evaluations

- Wednesday, March 4, 2015 - *CVM Student Focus group: Hayley Ball and Susanna Perenboom (DVM'16)*
- **Description:** The focus group worked on improving the return rate for teaching evaluations. They collected ideas from students, analyzed the possibilities, and together with Dr. Hines came up with some

succinct, feasible ideas to help increase the number of teaching evaluations completed. They also include some thoughts by the students as to improving the overall culture of the exchange of information between professors and students

## Simulation in Veterinary Medical Education. . . why and how?

- Thursday, March 26, 2015 - *Dr. Julie Cary, DVM, Director of Simulation Center*
- **Description: Why?** What is the value of simulation and how does it impact how we teach and learn? Dr. Cary briefly covered the educational theory that supports the use of simulation in medical education and some of the interesting research that informs how they are approaching their design of the CSC. **How?** Dr. Cary also talked about the current set-up and design of the simulation center and some suggestions of where it may go in the future. From that point, the audience was invited to participate in generating ideas of how to use simulation to augment and enhance learning.

## Getting To Know Blackboard Learn, An Introduction to Blackboard Learn and Quiz Building

- Wednesday, April 8, 2015 - *Chris Lindberg*
- **Description:** This was a skill building workshop & orientation to Blackboard. We discussed the basic interface and work flow for using Blackboard in course design and management. Chris introduced the audience to the array of tools available beyond quiz building. Then he dove into the nuts and bolts of building quizzes and exams. The goal of this workshop was to give the audience a hands-on experience using Blackboard.

## Educational Research Grant Reports:

- Monday, JApril 20, 2015 -
- **The Impact of Active Learning on Microbiology Class and Program Outcomes** - *PI – Dr. Susan Wang (SMB) & Co-PI- Dr. Phil Mixter (SMB)*
- **Adaptation of the Motivation, Attitudes, and Retention Survey (MARS) Instrument for Assessment of Microbiology Education**– *PI – Dr. Phil Mixter (SMB) & Co-PI Dr. Jennifer LeBeau (COE)*

# Brown Bag Discussion Included:

## Summer “Book” Club Informational Meeting

- Tuesday, May 5, 2015 - *Drs. Steve Lampa, DVM, & Rachel Halsey, DVM*
- **Description:** The CVM Teaching Academy summer “book” club continued this year. For the past five years we have had a successful program which has provided a great opportunity for anyone interested in Teaching & Learning to get together and discuss educational topics in a comfortable setting. This informational meeting covered the idea for the program this year and a tentative plan.

## Using a Mobile App to Stimulate Student Learning

- Tuesday, May 26, 2015 - *Dr. Robert Keegan*
- **Description:** Dr. Rob Keegan’s presented his approach of encouraging and improving student course engagement by developing a mobile application for anesthetic drug and infusion rate calculations that provides unlimited practice and feedback on demand. This “gamification” was welcomed by students who practiced often and performed well on subsequent related exam assessments. Dr. Keegan also discussed the course context, student participation, student survey data and app development aspects of this project.

## CVM Teaching Academy Town Hall

- Thursday, July 2, 2015 - *Drs. Steve Hines, DVM, PhD, DACVP & Phil Mixter, PhD*
- **Description:** The CVM Teaching Academy implemented a new approach, with small-group Learning Communities starting in January 2015. These groups were formed around topics suggested during a Town Hall meeting early in the semester. The goal was to create smaller groups that addressed individual instructors’ personal interests and goals. Now, after a semester trial, several suggestions have emerged from learning community leaders and interested participants. This meeting revisited the intent, reflected on the effectiveness of the current configuration and discussed options for enhancement as we move into fall semester.

## Panopto – The NEW Lecture Capturing System

- Thursday, August 27, 2015 - *Chris Lindberg*
- **Description:** This was an orientation to the new lecture capture software – Panopto - how to get started and what you need to do next. This orientation demonstrated: How Panopto will be integrated with **Blackboard**; How the system works from both the student and instructor perspective ; The lecture scheduling process; How you can get started manually recording your own video; Editing features; & Finally, the strengths of the program as a file management tool

## Lunch & Discussion with Dr. Robert & Elizabeth Bjork

- Friday, September 11, 2015 - *Invited Guest Speakers Drs. Robert & Elizabeth Bjork - Professor in the Department of Psychology at the University of California, Los Angeles*
- **Description:** The CVM Teaching Academy had the opportunity to have a question and answer session with the guest speakers.

## Teaching with Tech and Future Trends

- Wednesday, September 30, 2015 - *Dr. Phil Mixter, PhD*
- **Description:** The 22nd annual meeting of ASMCUE provided instructors with varied opportunities for professional development and interaction. Several sessions focused on technology in education. A panel of leaders further provided insights into future trends in higher education. A review of several highlights from the four-day conference was provided.

## Teaching Academy Learning Community Showcase:

- **Monday, November 11:** Peer Observation & Learning Assessment
- **Friday, November 13:** Team Base Learning & Clinical Teaching
- **Thursday, December 3:** Active Learning
- **Thursday, December 10:** Metacognition

**Webinars Included:** More information about the webinars can be found on the external website.

**Value Added Student Roles that Align Education and Health System Needs**

- September 10, 2015

**A Developmental Pursuit of Foundational Scientific Knowledge**

- September 17, 2015

**Closing the Gap Between Undergraduate Medical Education and Practice Realities of Today and Tomorrow**

- September 24, 2015

**An Accelerated Pathway to Produce 21st Century Primary Care Physicians**

- October 1, 2015

**Educating Medical Students in a Clinical Environment Throughout the Entire Curriculum**

- October 8, 2015

**Taming the Monster: Rethinking the Role of Content**

- November 10, 2015 (Pullman)
- December 15, 2015 (Spokane)



## MAY 18-21, 2015 - National Academy of Sciences (NAS) Summer Institute at Washington State University

**Summary:** The WSU Provost's Office and the WSU CVM TA hosted the 2015 National Academies' of Science Summer Institute on the WSU Pullman campus.

The theme for the Summer Institutes was "scientific teaching." This was the second cohort of the NAS Institution. There was one external facilitator and 3 WSU facilitators from cohort 1 (summer 2014).

There were 10 participants selected from 2 campuses (Pullman & Tricities) Faculty from 6 WSU colleges represented 9 departments. The participants learned practical strategies for enhancing student learning. The institute modeled the scientific teaching principles of active learning, assessment, and diversity, which were integrated into all aspects of the week's schedule. Activities included reflective writing, planning, reading, researching, teaching methods, teaching philosophy, interactive presentations, and developing teaching materials. By the end of the institute, participants had observed, evaluated, and collected a portfolio of innovative teaching approaches and instructional materials that were ready to be adopted and adapted to their own teaching environments.

**Day 1:**

- Scientific Teaching
- How People Learn

**Day 2:**

- Assessment
- Active Learning
- Group Work

**Day 3:**

- Diversity
- Scientific Teaching in Practice
- Group Work & Sharing

**Day 4:**

- Presentation & Wrap-up

**Future Plans:**

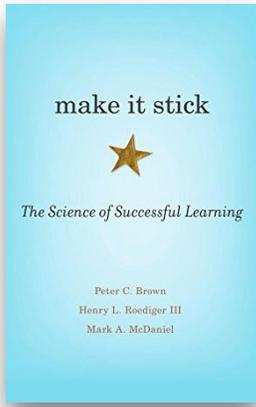
**1. Cohort 3 in Summer 2016**

- a. Faculty, Postdocs, and PhD students from WSU, UI, Lewis and Clark State College, Gonzaga, Whitworth, North Idaho College, Eastern Washington University, etc.
- b. 1 external facilitator + 3 WSU facilitators from cohort 2 (Summer 2015)

**2. Beyond:**

- a. Mobile NAS Summer Institute at WSU-Vancouver or WSU-Tri-Cities
- b. Expansion of program to other institutions in the Inland Northwest

# CVM Teaching Academy Summer "Book" Club

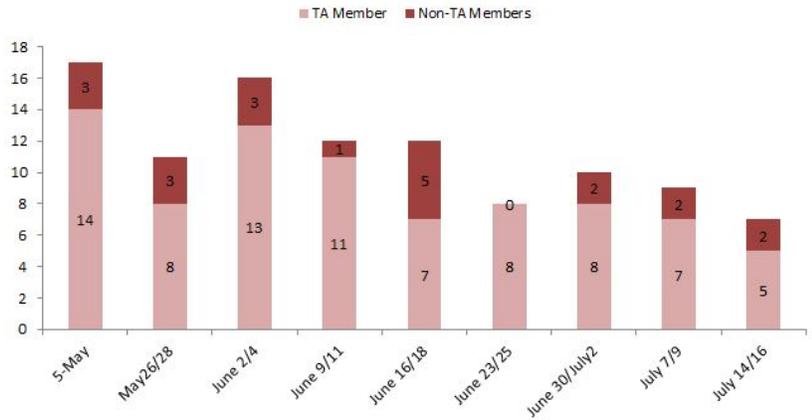


For the past five years, we have had a successful summer program, which has provided a great opportunity for Teaching Academy members to get together and discuss educational topics in a comfortable setting.

The CVM Teaching Academy Summer "Book" Club continued this year with the activity to read a selected

chapters from the book "Make It Stick: The Science of Successful Learning" by *Peter C. Brown, Henry Roediger, and Mark McDaniel*. The format of the chapters within this book lend themselves to productive discussions and allowed participants to attend as time allowed. **(15 facilitators covering 8 chapters over a 8 week period this summer.)**

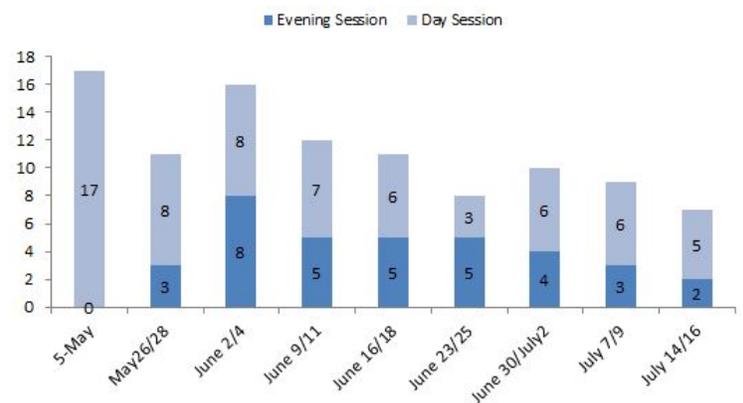
**Attendance:** There were 33 people in total that attended at least one program this summer – 66% decrease from last summer. **9 out of the 33 (27.3%)** were new faculty, graduate, or staff members that had never participated before – 2 of the 9 only attended 1 session.



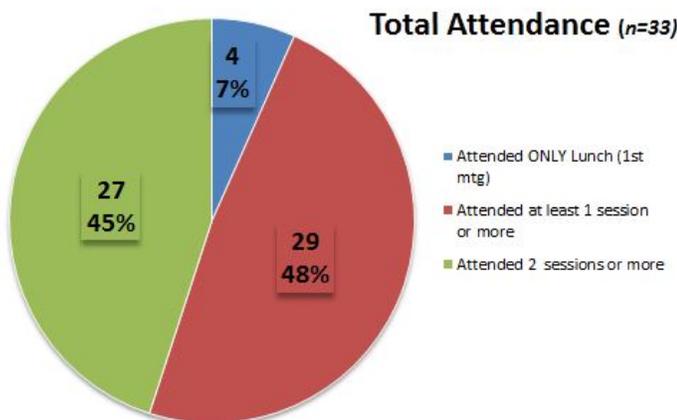
Based on the survey following the summer book club 100% of the participants agreed to strongly agreed that they have gained new insight from reading the book and plan to apply at least one new insight from the book to their teaching.

For a full summary of the survey, please [click here](#)

Total Ave. Attendance	Evening Session	Day Session
11	4	7



	2013	2014	2015
Attended ONLY the Organization Mtg	3	8	4
Attended at least 1 session or more	38	47	29
Attended 2 sessions or more	32	34	27

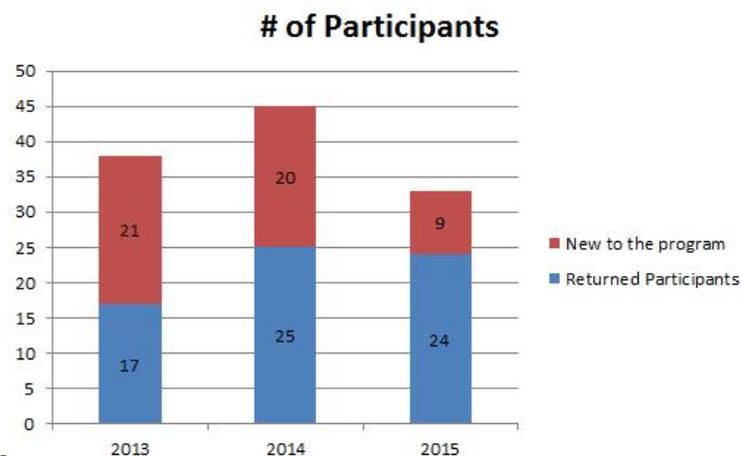
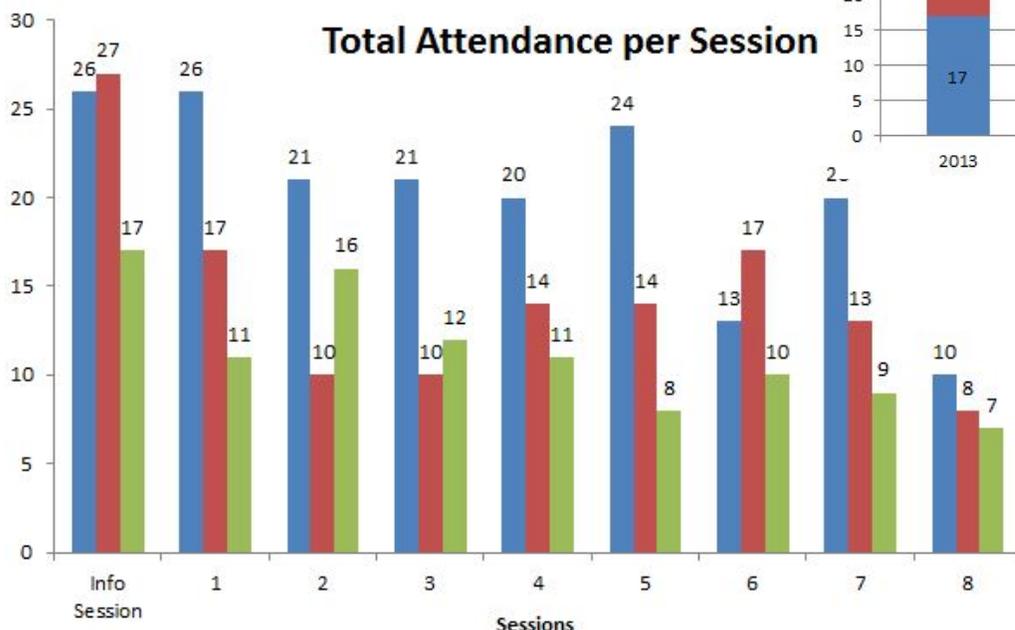


# The Summer Book Club Influence & Implementation:

The CVM Teaching Academy summer book/journal club has continued for the past 5 years. Data has been collected over the past 3 years and summarized below.

**2013:** *"How Learning Works" by Ambrose, et al.* **2014:** *Teaching Professor Newsletter archived articles (May 2014 to December 2012).*

	# Events	Total # Individuals
2013	17	181
2014	17	130
2015	18	101



## How have you implemented what you gained from the summer sessions?

"In multiple instances, in lecture, lab and assignments, I've tried to increase opportunities for students to actively PRACTICE and get detailed feedback. This includes case presentations in labs, where we moved this past year to a small group format wherein multiple students could acquire practice in concisely presenting a clinical case. In the past only 3-4 presented and then to the entire class."

"I have sharpened my attention to meta-cognition by planning opportunities for prompting students to formally and informally reflect. Also, provided explicit examples (talking out loud) of critical thinking habits of mind and approaches to research."

"Lots: modeling expert thinking, recognizing the needs of novice learners, trying new assessments."

"Mainly from the *"How Learning Works"* book. While I teach, being mindful of student's prior knowledge, metacognition and class climate."

"I continue to work to be more explicit about my expectations and provide students with opportunities to practice prior to assessment, using low stakes repetition to aid learning. In my online course, I developed an intro activity to help them figure out the expectations for later assignments while gaining ease with navigating the software. In my other science courses, I have worked to talk about learning (using book study materials) to help students with metacognition and recognize how to boost their efficiencies."



# Educational Research Grant

The College of Veterinary Medicine (CVM) Teaching Academy Educational Research Grant (ERG) Intramural program is designed to

1. Promote educational research in the WSU College of Veterinary Medicine
2. Foster innovation in the college's DVM, undergraduate, and graduate curricula
3. Support teaching and learning-focused scholarship by faculty involved in the educational missions of the CVM.

## **ERG Program B: Experiments in Teaching Grants:**

*Limited to \$5,000 per grant annually, these grants are designed to result in a peer-reviewed publication within one year of completion date. These awards may be renewable twice, for up to 3 years total support. COE incentive: An additional \$3,000 is available for proposals that feature a substantive collaboration with faculty co-investigators in the WSU College of Education.*

### **2015-16 Awarded Grant included:**

Title	PI	Co-PI
The effect of a mobile device problem generating app on learning outcomes in a Pharmacology and Anesthesiology course.	Dr. Robert Keegan (VCS)	Nicolas Villarino (VCS); John Gay (VCS); Scott Bullers (VIS)

**Background:** Veterinary students must learn to perform drug calculations quickly and accurately, yet many students view these calculations as difficult, tedious and unengaging. We previously created a mobile device-based anesthetic problem generator (VCalc) with the goal of improving student engagement while providing practice problems on demand. Student survey results revealed that the app was engaging and useful for practicing drug calculations. Additionally, students indicated that they would like to see similar apps developed and used within the curriculum. We propose to introduce mobile device problem generating apps for 2 CVM courses and evaluate the construct for

short and long term learning efficacy.

**Methods:** Ninety, WSU-based, veterinary students in the class of 2018 enrolled in Pharmacology and Anesthesiology courses will be studied to evaluate the acceptance and learning efficacy of the applications. Using a randomized, cross-over block design, students will be divided into 4 quartiles based upon their class rank and randomly assigned within each quartile to one of 2 learning treatment groups (APP\_PHARM or TRAD\_PHARM). After attending a VM 522 Foundations of Pharmacology lecture on Pharmacology drug calculations (Fall, 2015), APP\_PHARM students (N=45) will be assigned to work through the Pharmacology app while TRAD\_PHARM students (N=45) will be assigned to work through a similar group of traditional paper-based Pharmacology practice problems. Three weeks following the lecture all students will take an examination comprised of 10 Pharmacology calculation questions. During VM 587 Clinical Anesthesiology (Spring, 2016), all students will attend a lecture on Anesthesiology drug calculations and treatment groups will be crossed over such that TRAD\_PHARM students will be assigned to work through the Anesthesiology app while APP\_PHARM students will be assigned to work through a similar group of paper-based anesthesia practice problems. Three weeks following the lecture all students will take an examination comprised of 10 Anesthesiology calculation questions. In the subsequent semester (Fall, 2016), students in both groups will take an examination comprised of 10 Pharmacology and Anesthesiology calculation questions during VM 524 Clinical Pharmacology.

**Analysis:** VM 522 and VM 587 exam scores will be compared using a paired t-test, comparing scores within each class rank quartile using an alpha value of .05. VM 524 exam scores will be compared to scores of students in the class of 2017, comparing scores within each class rank quartile using an alpha value of .05.

**Anticipated Outcome:** We predict that students accessing the app will outperform students using traditional paper-based practice problems.

**Summary of Progress(through December 2015):**

**Educational Research Grant Goals and Objectives**

The ERG consisted of two objectives.

- Design and develop two mobile drug calculation practice apps (VCalcPharm & VCalcAnes).
- Conduct an experiment to compare short and long term learning between traditional paper-based practice problems and App generated practice problems. Students in the Class of 2018 will be followed throughout 3 semesters with the goal of evaluating their short and long term learning.

**Specific Accomplishments**

Specific accomplishments between 1 July and 31 December 2015 are as follows:

1. Android and iOS versions of two mobile device Apps, VCalcPharm and VCalcAnes, were developed and submitted to/reviewed by the Apple App Store and the Google Play Store to enable student distribution.
2. An Azure-based database was constructed to store student App attempts and number of correctly solved. The Apps communicate with the database and provide continual updates to students and to the instructors as to student practice.
3. Two App guides, one for each of the two Apps, were created.
4. Students in VPh 522 were randomly assigned to either download or use the App as a practice method or were assigned a set of paper-based drug calculation problems.
5. Two drug calculation quizzes were developed; one was administered to 3rd year students enrolled in VPh 524 and one was administered to 2nd year students enrolled in VPh 522. Quiz score data was collected for subsequent analysis.
6. R Keegan and S Bullers presented an abstract at the 2015 Tech Ed conference *Use of a Mobile Device App to Foster Deliberate Practice within an Anesthesia Course*. (October 1-2, Washington State University, Pullman, WA). This abstract presentation detailed our ongoing

evaluation of this teaching strategy.

7. Manuscript accepted “*Use of an Electronic Fetal Monitor Mobile Device Simulation as a Pre-Class, Active Learning Exercise*”, Journal of Nursing Education, October, 2015. Publication: **Keegan RD**, Oliver MC, Stanfill TJ, Stevens, KV, Brown GR, Ebinger MH, Gay, JM. Use of a Mobile Device Simulation as a Preclass Active Learning Exercise. J Nursing Educ, 2016;55:56-59.

**Problems Encountered and Methods of Resolution Used**

**Problem 1: Small student sample size for students enrolled in VPh 522.** Although the VCalcPharm App was made available to randomly selected students enrolled in VPh 522, there were no course points allocated to either of the two practice activities. As a result only 4 out of the 50 assigned students installed the App on their mobile devices prior to the drug calculation quiz. In contrast to this low number, 60 students installed the VCalcAnes App on their mobile devices and attempted 1249 calculation problems when there were course points awarded to the activity in VM 587.

**Resolution:** We will continue with our planned comparisons in the spring of 2016 during VM 587 and in the fall of 2016 during VPh 523. We obviously do not have comparison data from the fall 2015 VPh 522 Pharmacology course and will plan on repeating a similar study with the class of 2019 being mindful to assign course points to the activity.

**Abstract Presentation:** R Keegan and S Bullers presented an abstract at the 2015 Tech Ed conference *Use of a Mobile Device App to Foster Deliberate Practice within an Anesthesia Course*. (October 1-2, Washington State University, Pullman, WA)

**2014-15 Awarded Grant included:**

Title	PI	Co-PI
The Impact of Active Learning on Microbiology Class and Program Outcomes	Dr. Susan Wang (SMB)	Dr. Phil Mixer (SMB)

**Final Report:**

**Outcomes and Deliverables**

The goal of this project was to use the subject of microbiology as a model topic to assess whether “active learning” – the use of low-stakes problem-

solving during class to illustrate and/or reinforce testable concepts – results in learning gains both within the course in which it is used and/or in later courses that build upon the material. In Fall 2011, the investigators implemented active learning in MBioS 305, General Microbiology, a junior-level microbiology course in which molecular biosciences majors must earn a C or better grade. To address the research goal, the investigators proposed the following two specific aims.

**Aim 1:** Does active learning in MBioS 305 improve overall course performance? The working hypothesis was that active learning exercises improve overall course performance and reduce the number of failing grades, defined as grades of C- and below.

**Aim 2:** Does active learning in MBioS 305 improve overall course performance in later coursework that uses MBioS 305 as a prerequisite? The working hypothesis was that active learning does assist in improving grades in subsequent microbiology courses that build off material presented in the original course.

To investigate these aims, the investigators analyzed and compared final grade data for MBioS 305 and for subsequent senior-level microbiology courses (MBioS 410, 440, and 450) taken by microbiology and/or molecular biosciences students who took MBioS 305 with or without active learning. The “before active learning” group consisted of students who took MBioS 305 between Fall 2009 and Spring 2011; the “after active learning” group consisted of students who took MBioS 305 between Fall 2011 and Spring 2014. Due to time constraints and grade availability, the Fall 2014 or Spring 2015 students were not included in these analyses, which are summarized in the table on the next page. However, the data has been obtained and will be include in a later analysis.

In brief, active learning does in fact appear to improve grade performance among both microbiology and other molecular biosciences majors. Interestingly, microbiology majors did (before active learning) and do (after active learning) not do as well academically in MBioS 305 as the other molecular biosciences majors. (It has not been done yet but could easily separate the “molecular biosciences” majors into biochemistry/biophysics, genetics/cell biology, and the now defunct biotechnology major.

Among later courses that rely upon material introduced in MBioS 305, students in medical microbiology (MBioS 410) show the most

significant learning gains. In immunology (MBioS 440), students appear to show slight learning gains. Part of this could be due to the fact that the instructor for MBioS 440 changed in Fall 2012. In microbial physiology (MBioS 450), microbiology majors actually showed a slight drop in grade performance after implementation of active learning. However, in looking at the overall numbers of students enrolled in MBioS 450, the sample size was very small. This course did not become required for microbiology majors until a few years ago, circa 2013. Overall, average grades in 400-level courses showed a slight improvement for both microbiology and other molecular biosciences majors.

Student Grades (4-Point Scale)	Majors Before Active Learning	Majors After Active Learning	Affiliated Non-Majors Before Active Learning	Affiliated Non-Majors After Active Learning
MBioS 305 (General Microbiology)	2.12 ± 1.10 (n = 33)	2.50 ± 0.85 (n = 31)	2.49 ± 0.89 (n = 57)	2.75 ± 0.89 (n = 109)
MBioS 410 (Medical Microbiology)	2.63 ± 0.74 (n = 28)	2.98 ± 0.71 (n = 17)	2.24 ± 0.88 (n = 4)	2.94 ± 0.72 (n = 5)
MBioS 440 (Immunology)	3.13 ± 0.86 (n = 24)	3.24 ± 0.66 (n = 27)	3.10 ± 1.35 (n = 15)	3.15 ± 0.98 (n = 23)
MBioS 450 (Microbial Physiology)	3.17 ± 0.94 (n = 6)	2.81 ± 0.54 (n = 9)	2.85 ± 0.21 (n = 2)	2.90 ± 1.01 (n = 3)
Average 400-level grades	2.88 ± 0.70 (n = 28)	3.02 ± 0.63 (n = 27)	3.02 ± 1.25 (n = 15)	3.12 ± 0.94 (n = 23)

### Progress/plans for publication and presentation

Preliminary results were presented at a CVM Teaching Academy-sponsored lunch session at the end of the Spring 2015 semester. Though the attendance was relatively low (~10 people), the presentation was well-received, and a number of questions were asked by the audience. An abstract for poster presentation of our results was accepted by ASM-CUE after a competitive evaluation process in early 2015. The poster was presented by the co-investigator, Dr. Philip Mixer, at ASM-CUE at the end of May. The investigators will attempt to present the latest results at the upcoming 2016 WSU Academic Showcase. After further data evaluation and analysis, the investigators hope to write and submit a manuscript based upon this and the previous Smith Teaching and Learning Grant proposal to either CBE-Life Sciences or Journal of Microbiology & Biology Education (JMBE). Due to the PI’s research and teaching commitments as well as the potential need for more data, such a manuscript likely will not be submitted until Summer 2016.



# Publications & Presentations

Below is a list of members that have published or presented material/data as it relates to teaching and learning.

## Publications:

Member	Publication
Dr. Julie Cary	Zeugschmidt EL, Farnsworth CH, Carroll HS, Lucia TA, Hinckley MM, Gay JM, <b>Cary JA</b> . Effects of a developing surgical skills curriculum on third year DVM student surgical performance. <i>J Am Vet Med Assoc</i> . Accepted March 2015
	Carroll HS, Lucia TS, Farnsworth CH, Hinckley MM, Zeugschmidt EL, <b>Cary JA</b> . A change in course in Surgical skills Training: Results of a Pilot Program. <i>J Am Vet Med Assoc</i> . Accepted March 2015
	Cary JA, Gay J, Carroll HS, Farnsworth CF, Hinckley MM, Lucia TA, Zeugschmidt EL. Building an evidence-base to Better Determine Surgical Curriculum and Outcomes Assessment: results of a national survey of stakeholders. <i>J Am Vet Med Assoc</i> . Submission March 2016
Dr. Suzanne Kurtz	Rider EA, Slade D, Branch WT, <u>Kurtz S</u> , Longmaid HE, Kwok Hung JP, Ho MJ (2015) Translating healthcare values into action: An international, interprofessional collaboration. <i>Journal of Interprofessional Education &amp; Practice</i> . June 2015, 1(2): 68.
	Moore DA, Sisco WM, <u>Kurtz S</u> , Siler, JD, Pereira RV, Warnick LD, Davis MA (2015) Improving dairy organizational communication from the veterinarian's perspective: Results of a Pilot Continuing Veterinary Medical Education Program. <i>Journal of Veterinary Medical Education</i> . Ahead of print version, pp 1-8. DOI
	Richard C, Lussier MT, <u>Kurtz S</u> (2015) Une preesnetation de l'approche Calgary-Cambridge. In Richard C and Lussier MT (Eds.) <i>La communication professionnelle en santé, 2e</i> . ERPi, Saint Laurent, Quebec.
	Kurtz SM (Invited book chapter, in press 2015) Clinical communication education for surgeons. In White SJ and Cartmill J (Eds.) (Forthcoming 2016) <i>Communication in Surgical practice</i> . Equinox Publishing: Sheffield UK.
	Kurtz S (In press 2015) Veterinary Medicine: A parallel world of communication in healthcare (Invited 'health communication in action' sidebar and exercises). In Yamasaki J, Geist-Martin P, Sharf BF (Eds) (Forthcoming 2016) <i>Storied Health and</i>
	Adams C and Kurtz S (Invited book chapter submitted December 2015) Communication in Veterinary Medical Education. In Hodgson J and Pelzer J (Eds.) (Forthcoming 2016) <i>Veterinary Medical Education: A practical guide</i> . Wiley-Blackwell: Hoboken (US) and Oxford (UK).
	Murnaghan JJ, Lussier MT, Richard C, Kurtz S, Zanussi L, Schachar N, Buckley R (Submitted 2015) Canadian Orthopaedic Residents' Forum (CORF): A Different Orthopaedic Review Course with 4 year Evaluation.

**Publications:** (continued)

Member	Publication
Dr. Suzanne Kurtz	Adams C and Kurtz S (Forthcoming 2016) <i>Skills for Communicating in Veterinary Medicine</i> . Otmoor Publishing, Oxford (UK) and MHRI Publishing, Parsipanny NJ. (The majority of the writing for this book occurred in 2015.)
Dr. Samantha Gizerian	Harrington, IA, Grisham, W, Brasier, DJ, Gallagher, SP, <b>Gizerian, SS</b> , et al (2015). An Instructor's Guide to (Some of) the Most Amazing Papers in Neuroscience. <i>Journal of Undergraduate Neuroscience Education</i> 14(1), R3.
Dr. Phil Mixter	Souza, G. and P.F. Mixter. "Role-playing in a Vaccination Debate Strengthens Student Scientific Debate Skills for Various Audiences." <i>Journal of Microbiology and Biology Education (JMBE)</i> . Tips and Tools Section; in press May 2016

**Presentations/Posters:**

Member	Date	Presentation
Dr. Samantha Gizerian	<b>April 2015 - TEDxWSU, Pullman, WA</b>	Presentation: "Science Communication: making connections." - <b>Invited</b>
Dr. Suzanne Kurtz	<b>April 10, 2015 - Canadian Orthopaedic Residents Forum, Calgary, Alberta, Canada</b>	Plenary presentation: "Raising the Bar on Communication in Surgical Practice" - <b>Invited</b>
Rider EA, Slade D, Branch WT, <u>Kurtz S</u> , Longmaid III HE, Pun J, Ho MJ	<b>April 17-18, 2015 - National Academies of Practice Annual Forum</b> Alexandria, Virginia	Poster - Translating Healthcare Values into Action: An International, Interprofessional Collaboration - <b>Peer Reviewed</b>
Chaney N and Kurtz S	<b>April 28, 2015 - Malcom Renfrew Interdisciplinary Colloquium, University of Idaho. Moscow, Idaho</b>	Oral presentation - "One Health. One World. Let's Talk" - <b>Invited</b>
J Cary, R. Jensen, D. Haley, & Sue Wedam, DVM	<b>May 2015 - Technician student clinical communication workshop; Yakima Valley Community College,</b>	Practitioner coach development - <b>Invited</b>
Dr. Samantha Gizerian	<b>May 2015 - Academic Advising Forum: "Technology in Context", Pullman, WA.</b>	Presentation: "Blackboard for advising" - <b>Invited</b>
Dr. William Davis	May 2015 - <b>Department of Biology, Carroll College, Helena, MT</b>	Presented a two day workshop on programmatic assessment and curriculum mapping during an annual faculty retreat.
S.C. Wang and P.F Mixter	<b>May 2015 - American Society for Microbiology Committee on Undergraduate Education (ASMCUE)</b>	Poster: Course and Programmatic Changes Following Active Learning Interventions. - <b>Peer Reviewed</b>
Dr. Suzanne Kurtz	<b>June 29, 2015 International Center for Communication in Healthcare &amp; Charter for Compassion Symposium, Hong Kong</b>	Plenary presentation: "Exploring the Relationship Between Compassion and Skilled Communication: Translating Compassion into Action" - <b>Invited</b>
Dr. Suzanne Kurtz	<b>June 27 &amp; 28, 2015 - International Center for Communication in Healthcare Roundtable, Hong Kong</b>	Plenary presentation: "One Health: research, education, & policy potentials for IRRCH" - <b>Invited</b>

**Presentations/Posters:** (continued)

<b>Member</b>	<b>Date</b>	<b>Presentation</b>
Dr. Julie Cary	<b>July 2015 - iPBS WSU CVM Graduate umbrella program</b> , Leavenworth, WA	Orientation Workshops (Mentorship and communication) - <b>Invited</b>
Dr. Steve Lampa	<b>July 2015 - American Association of Veterinary Anatomist Conference</b> , Pullman, WA	"Utilization of a summer book club to expose faculty to educational pedagogy" - <b>Accepted for platform presentation and reviewed</b>
Dr. Robert Keegan	<b>July 2015 - Biennial Teaching Academy of the Consortium of West Region CVM Summer Conference</b> , Pullman, WA	"Use of a mobile device anesthetic dosing problem generator (VCalc®) as a class exercise." - <b>Peer Reviewed</b>
Dr. Phil Mixer	<b>July 2015 - Biennial Teaching Academy of the Consortium of West Region CVM Summer Conference</b> , Pullman, WA	Scholarship presentation entitled "Adaptation of the Motivation, Attitudes, and Retention Survey (MARS) Instrument for Assessment of Microbiology Education Enhancement Program (MEEP) Impacts." - <b>Peer Reviewed</b>
Dr. Suzanne Kurtz	<b>August 198, 2015 - Honors College Student Mentors - Fall Semester</b> , Washington State University,	Workshop - Communication for Leadership and Mentoring - <b>Invited</b>
Dr. Julie Cary	<b>August 2015 - Saint Georges University School of Veterinary</b>	Stage one-Communication Coach Development - <b>Invited</b>
J Cary, L Russell, R. Jensen, D. Haley	<b>August 2015 -Technician workshop (8 hours); WSU Clinical Communication Program</b> , Pullman,	Workshop: Communicating with Clients
Gizerian S, Gutierrez K, Laughter L, Poch S, Whiting B	<b>September 2015, University of Idaho 12th Annual Advising Symposium</b> , Moscow, ID	"Using a Learning Management System for academic advising: create an advising course." - <b>Invited</b>
Gizerian, S, S. Ackerson, L. Laughter, B. Whiting	<b>September 25, 2015 WSU Advising Forum: "Advisors' role in student success"</b> , Pullman, WA	"Using Blackboard to support student success" - <b>Invited</b>
Rider E, Slade S, Kurtz S, Branch W, Longmaid HE, Pun JKH, Ho MJ	<b>September 29 – October 2, 2015 - Collaborating Across Borders V (CABV) conference</b> , Roanoke, Virginia	Poster: Transforming Healthcare Relationships: Restoring the Primacy of Core Values - <b>Peer Reviewed</b>
Kurtz S and Rider E	<b>October 1, 2015 - Collaborating Across Borders V</b> , Roanoke, Virginia	Core Values and Skilled Communication: Interdependent Dimensions of Interprofessional Practice and Education Workshop (90 minutes) - <b>Peer Reviewed</b>
J Cary, L Russell, R. Jensen, D. Haley	<b>October 2015 - WSU Homecoming CVME</b> , Pullman, WA	Clinical Simulation Center open house
Dr. Julie Cary	<b>October 2015 - WSU Homecoming CVME</b> , Pullman, WA	Client Adherence mini workshop - <b>Invited</b>
Dr. Robert Keegan & Scott Bullers	<b>October 2015 -WSU Tech Ed Conference</b> , Pullman WA	Using a Mobile App to Stimulate Student Learning

**Presentations/Posters:** *(continued)*

Member	Date	Presentation
Rider EA, Slade D, Kurtz S, Branch WT, Longmaid HE, Kwok Hung JP, Ho MJ	<b>October 25-28, 2015 - International Conference for Communication in Healthcare</b> , New Orleans, Louisiana	Poster: (2015) Putting the Charter to Work: Enhancing Healthcare Relationships Through Core Values
Dr. William Davis	<b>November 2015 - American Association of Colleges and Universities-Project Kaleidoscope Annual Meeting</b> . Seattle WA	<b>PULSE: Promoting Vision and Change through Departmental Transformation:</b> Peer Reviewed Workshop on the Northwest PULSE Community of Practice devoted to Departmental/Institutional educational transformation for all institutions of higher

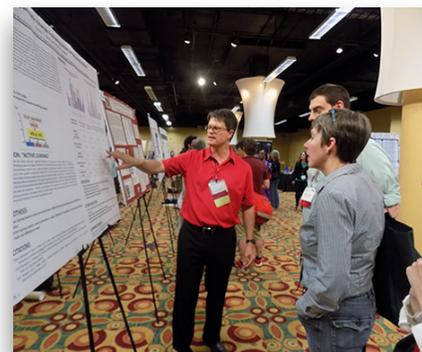
# Professional Development

**Travel Grant :**

The College of Veterinary Medicine (CVM) Teaching Academy (TA) developed a "Professional Development Travel Grant." The grant is designed to provide partial funds to assist active TA members to travel to opportunities that will enhance their knowledge, skills, and abilities in a manner that will improve teaching and learning for the college and/or promote professional development in teaching.

These funds are specifically designed to aid in the travel and registration costs of these opportunities. Members are expected to find alternative sources of funding to cover any additional costs. In return for the funding the members are expected to provide a report and presentation of their experience and share new ideas that they gained from attending these events.

Further information can be found on the internal website



Member	Conference	Date
Dr. Phil Mixer	<b>2015 American Society for Microbiology Committee on Undergraduate Education (ASMCUE) Annual Meeting</b> , Austin, TX	<b>May 28 - 31, 2015</b>
Dr. Robert Keegan	<b>TECH-Ed Conference - Technology and Education conference</b> , Pullman, WA	<b>October 1-2, 2015</b>
Drs. Leslie Sprunger & Cynthia Faux	<b>Team Based Learning Regional Workshop</b> , Seattle, WA	<b>October 10, 2015</b>

## Other Travel:

**Conferences Attended:** 20 people attended 17 conferences this summer

<b>Member</b>	<b>Conference</b>	<b>Date</b>
Dr. Suzanne Kurtz	<b>Canadian Orthopaedic Resident Forum</b> , Calgary, Alberta, Canada	<b>April 10-13, 2015</b>
Dr. Kay Brothers	<b>Future of Bioscience Graduate and Postdoctoral Training</b> , Ann Arbor Michigan	<b>May 3-5, 2015</b>
Dr. Suzanne Kurtz	<b>3rd Annual Conference of the Academy for Professionalism in Health Care</b> , Louisville, Kentucky	<b>May 7-9, 2015</b>
Dr. Samantha Gizerian	<b>Alan Alda Center for Communicating Science Workshop at the University of Oregon</b> , Eugene, OR	<b>May 14-15, 2015</b>
Dr. Suzanne Kurtz	<b>Roundtable for the International Research Center for Communication in Healthcare</b> Hong Kong	<b>June 27-28, 2015</b>
Dr. Suzanne Kurtz	<b>Symposium for the International Research Center for Communication in Healthcare</b> , Hong Kong	<b>June 29, 2015</b>
Dr. Samantha Gizerian	<b>Gordon Research Conference on Undergraduate Biology Education Research</b> . Lewiston, ME	<b>July 12-17, 2015</b>
Dr. William Davis	<b>AACU-PKAL Summer Leadership Institute. Invited Faculty Mentor for a group of 20 early career or mid-career STEM Faculty looking to transition to new leadership positions.</b> Frederick, MD	<b>July 2015</b>
Drs. Phil Mixter, Steve Lampa, Suzanne Kurtz, Leslie Sprunger, Pam Lee, Linda Martin, Cynthia Faux, Patrick Wilson, Steve Hines, Rachel Halsey, Samantha Gizerian, Julie Cary, William Davis, Dharani Ajithdoss, John Nilson, Gary Haldorson,	<b>Biennial Teaching Academy of the Consortium of West Region CVM Summer Conference</b> , Pullman, WA	<b>July 23-24, 2015</b>
Dr. Suzanne Kurtz	<b>Collaborating Across Borders V</b> , Roanoke, Virginia	<b>September 29-October 1, 2015</b>
Dr. William Davis	<b>Northwest PULSE 3rd Annual Workshop</b> , Seattle, WA. Designed and helped lead 3 day workshop that required 3-person faculty teams from 14 institutions across the Pacific Northwest to use Systems Thinking to drive Departmental/Institutional transformation of their life science educational programs.	<b>October 2015</b>
Dr. Robert Keegan & Chris Lindberg	<b>TECH-Ed Conference</b> - Technology and Education conference, Pullman, WA	<b>October 1-2, 2015</b>
Dr. Suzanne Kurtz	<b>International Conference for Communication in Healthcare</b> . New Orleans, Louisiana	<b>October 25-28, 2015</b>

**Other Travel:** (continued)

Member	Conference	Date
Chris Lindberg	<b>Educause Annual Conference 2015</b> (Online) ; Content and exploration of today's toughest technology issues facing campuses around the world. Online (Indianapolis, IN)	<b>October 27-29, 2015</b>
Dr. Kay Brothers	<b>Society for the Advancement of Hispanic/Chicano, Native Americans in Science (SACNAS)</b> , Washington DC	<b>October 28-31, 2015</b>
Dr. Valerie Russo	<b>Veterinary Wellness &amp; Social Work Summit</b> , University of Tennessee Knoxville, Tennessee	<b>November 2-3, 2015</b>
Dr. Kay Brothers	<b>Annual Biomedical Research Conference for Minority Students (ABRCMS)</b> , Seattle, WA	<b>November 11-14, 2015</b>



# Member Awards, Grants & Recognition

Below is a list of members that have received teaching related awards, grant, and recognition as they relate to teaching and learning.

Member	Recognition
Dr. Samantha Gizerian	NACADA Region 8 Outstanding Faculty Advisor
	WSU ACADA Outstanding Faculty Advisor
	Excellence in Support of Undergraduate Research Award
Drs. Cynthia Faux, Gary Haldorson, Steve Hines, Steve Lampa, Pamela Lee, Bob Mealey, & Leslie Sprunger	2015 - Jerry Newbrey Teaching Scholars
Drs. Fairfield Bain, George Barrington, & Pamela Lee,	2014-15 Richard Wescott Clinical Teaching Scholars
Dr. Tandi Ngwenyama	Zoetis Distinguished Teacher Award
Dr. Bob Mealey	Dr. Bob Mealey has been named the McEachern Distinguished Professor of Equine Medicine
Dr. Steve Hines	<u>Berger Keatts Distinguished Professor</u> - Reappointed
Dr. Suzanne Kurtz	2015 Recipient of the Lynne Payer Award for outstanding contributions to literature on the theory, practice and teaching of effective healthcare communication and related skills. American Academy on Communication in Healthcare.

**Awards, Grants, & Recognition:** *(continued)*

Member	Recognition
Dr. Suzanne Kurtz	Editorial Board for <i>Patient Education and Counseling</i> . Invited
	Management Council Member for the International Research Centre for Communication in Healthcare, base in Hong Kong and Sydney and Perth (Australia). Invited
	Participant in the National Board of Medical Examiners' workshop to develop an assessment program health coaches (a new kind of health worker) in China. Philadelphia, Pennsylvania, July 15 & 16, 2015. Invited
	Program/Mission Planning Retreat for the International Charter for Compassion. Participant. Bainbridge Island, Washington, September 24-26, 2015. Invited
	Completion of the 'CanMEDS 2015 Physician Competency Framework' (3rd edition – 2nd edition was published 2005) and it's companion resource known as 'The Milestones Guide'. The two documents represent the culmination of a multi-year initiative of the Royal College of Physicians and Surgeons of Canada known as Competence by Design (CBD). Since it first appeared in 1996, CanMEDS has become the most widely accepted and applied physician competency framework worldwide. CBD is an initiative begun in 2012 to implement an enhanced model for competency-based medical education in residency training and specialty practice. Having worked on the CanMEDS project since its inception in the early 1990's, I served for this most recent part of the CanMEDS framework and CBD project as an active member of the Advisory for the Communicator Role.
	Invited reviewer of research proposal for the NWO (Dutch Research Council) Humanities Board of the Netherlands Organization for Scientific Research.
	Initiation and implementation of first phase of an Environmental Scan Project with DeBowes R – discussion and observation re clinical communication with clients. Carried out during 2015 in veterinary practices in the Pullman, Tri-Cities, Yakima, Spokane, and Couer d'Alene areas.
	Examining Committee re Masters Thesis of C Hashizume, Community Health Sciences, University of Calgary, November 2015. Invited
	Reviewer for articles submitted to Journal of the American Veterinary Medical Association, Journal of Veterinary Medical
Dr. Phil Mixter	Editor, Reviews section, <i>Journal of Microbiology and Biology Education</i>

# Membership

Teaching Academy members have the opportunity to serve in a variety of capacities on established interest groups and ad hoc committees.

## **Steering Committee:**

**9 Members:** Steve Hines (Chair); Julie Cary; William Davis,; Samantha Gizerian; Linda Martin; Phil Mixer; Lynne Nelson; Rene Scalf,; and Leslie Sprunger

**Description:** The Steering Committee is the governing body that determines the detailed functions and working of the Teaching Academy. The duties of the steering committee are to oversee the activities of the academy and promote the teaching mission of the college.

## **The Teaching Academy of the Consortium of West Region Colleges of Veterinary Medicine Fellows:**

**17 members from WSU:** Dharani Ajithdoss; Bonnie Campbell; Julie Cary; William Davis; Cynthia Faux; Samantha Gizerian; Gary Haldorson; Steve Hines; Doug Jasmer; Suzanne Kurtz; Steve Lampa; Pamela Lee; Linda Martin; Phil Mixer,; Lynne Nelson; John, Nilson; and Leslie Sprunger,



**Description:** The Teaching Academy was established to identify, share and leverage expertise across the five institutions in the Consortium of West Region Colleges of Veterinary Medicine. The Academy will support the development and implementation of best practices and scholarship in veterinary medical education. Membership in the Consortium Teaching Academy is by nomination, and is a recognition of commitment to and excellence in teaching-related activities. Potential new members may be nominated to a three year term by current Teaching Academy Fellow or the Dean of a member institution (link to bylaws). Fellows are expected to be actively engaged in the mission of the Academy, which is to serve as a working group for the benefit of educators at all of the Consortium member institutions.

## **Major Committee Involvement:**

- **Steering Committee:** Steve Hines & Phil Mixer
- **Membership Committee:** Lynne Nelson & Leslie Sprunger
- **Biennial Summer Conference Planning Committee:** Phil Mixer & Leslie Sprunger
- **Initiatives:**
  - **External Review of Teaching:** Steve Hines, Phil Mixer, William Davis; Cynthia Faux, & John, Nilson
  - **Faculty Development:** Bonnie Campbell, Julie Cary, Samantha Gizerian, Steve Lampa
  - **Local Peer Review:** Dharani Ajithdoss, Gary Haldorson, Suzanne Kurtz, & Linda Martin,

## Current Membership: Total of 66 members

- ▶ Steve Hines, DVM, PhD, DACVPM (Chair);
- ▶ Dharani Ajithdoss, BVSc, MVSc, PhD
- ▶ Andrew Allen, DVM, PhD
- ▶ Suzanne Appleyard, PhD;
- ▶ George Barrington, DVM, PhD, DACVIM
- ▶ Fairfield Bain, DVM, MBA, DACVIM, DACVP, DACVECC
- ▶ Thomas Besser, DVM, PhD, DACVM
- ▶ Kay Brothers, PhD
- ▶ Ronald Brown, PhD
- ▶ Bonnie Campbell, DVM, PhD, DACVS
- ▶ Julie Cary, DVM, MS, DACVS
- ▶ Annie Chen-Allen DVM, MS, DACVIM; (Neurology)
- ▶ William Davis, PhD
- ▶ Rick DeBowes, DVM, MS, DACVS
- ▶ William Dernell, DVM, MS, DACVS,
- ▶ Dubraska Diaz-Campos, DVM, PhD
- ▶ James Evermann, MS, PhD
- ▶ Kelly Farnsworth, MSDVM, DACVS
- ▶ Raelynn Farnsworth, DVM
- ▶ Cynthia Faux, DVM, PhD, DACVIM
- ▶ Heather Fritz, DVM, PhD
- ▶ John Gay, DVM, PhD, DACVPM
- ▶ Samantha Gizerian, PhD
- ▶ Lisa Gloss, PhD
- ▶ Gary Haldorson, DVM, PhD
- ▶ Rachel Halsey, DVM
- ▶ Consetta Helmick, PhD
- ▶ Doug Jasmer, PhD
- ▶ Rob Keegan, DVM, DACVA
- ▶ Don Knowles, DVM, PhD, DACVP
- ▶ Suzanne Kurtz, PhD
- ▶ Steve Lampa, PhD
- ▶ Mary Sanchez Lanier, PhD
- ▶ Pamela Lee, DVM, MS, DACVIM;(Cardiology)
- ▶ Linda Martin, DVM, MS, DACVECC
- ▶ Susan Mathew, BVSc, PhD, BSc
- ▶ Norah McCabe, PhD
- ▶ Katrina Mealey, DVM, PhD, DACVIM,DACVCP
- ▶ Robert Mealey, DVM, PhD, DACVIM;
- ▶ Phil Mixter, PhD
- ▶ Lynne Nelson, DVM, MS, DACVIM (Internal Medicine, Cardiology)
- ▶ Danielle Nelson, DVM, PhD, DACVP
- ▶ Tandi Ngwenyama, DVM
- ▶ John Nilson, PhD
- ▶ Julie Noyes, DVM,
- ▶ Steve Parish, DVM, DACVIM
- ▶ David PrierDVM, PhD
- ▶ Tania Perez, DVM, MS
- ▶ Jennifer Ronngren, DVM
- ▶ Valerie Russo, PhD
- ▶ Rene Scalf, CVT, LVT
- ▶ Devendra Shah, BVSc, MVSc, PhD
- ▶ Diana Short, DVM,
- ▶ Steve Simasko, PhD
- ▶ Jennifer Slovak, DVM, MS, DACVIM (internal Med)
- ▶ Cleverson Souza, DVM, PhD, DACVP (Clinical)
- ▶ Leslie Sprunger, DVM, PhD
- ▶ Russ Tucker, DVM, DACVR
- ▶ Susan Wang, PhD
- ▶ Jane Wardrop, DVM, MS, DACVP
- ▶ Lane Wallet, DVM
- ▶ Jennifer Watts, PhD
- ▶ John Wenz, DVM, MS
- ▶ Patrick Wilson, DVM, MS



# CVM Teaching 2015 Annual Report

*Compiled by Rachel Halsey, DVM (Program Coordinator)*