"Apprentice" – a new teaching staff title?

While ‘seeing is believing’, one of the best ways to learn new teaching approaches is to teach them yourself. The CMU-UMN approach to faculty exchanges has changed over the past 3 years to involve more and more ‘apprentice’ and co-teaching opportunities.

The apprentice participates in the course and practices new teaching approaches under the mentorship of other faculty members. In co-teaching faculty from CMU and UMN work together in the entire course design and delivery.

The first 6 months of 2016 have included both apprentice and co-teaching opportunities for multiple faculty members in a wide variety of courses from food policy to risk analysis and leadership.

The Global Health Institute in Chiang Mai in February and the Public Health Institute in Minnesota in late May/June provided excellent apprentice and co-teaching opportunities involving continuing education built around OIE competencies.

Courses were taught in a condensed format over the course of a week rather than spread out over an entire semester, which provided a great deal of teaching experience in a short amount of time.

These Institutes attract students from multiple countries and a variety of disciplines. Small group assignments introduce apprentices to new ways of teaching that provide students an opportunity to expand their communications skills for working in interdisciplinary teams. Best of all, many of the CMU-UMN teaching collaborations have been so successful they will continue long after the OIE twinning project formally ends.

Assuring high quality National Veterinary Services through the alignment of veterinary educational curriculum with OIE guidelines on core curriculum and OIE recommendations on competencies of graduating veterinarians is the overarching objective of this OIE sponsored Twinning Project.
Continuing Professional Education - Thailand

Continuing professional education was provided to veterinarians working in government and teaching staff of multiple veterinary faculties through the 2016 Global Health Institute – Thailand (GHIT) at Chiang Mai University. Short courses were offered in One Health leadership, risk analysis and participatory epidemiology. The two weeks GHIT also included a research conference for sharing of the latest scientific knowledge on timely topics like emerging diseases, antimicrobial resistance, and food safety.

Right: Mapping exercise demonstrates epidemiological links in antimicrobial resistance.

Left: Traditional Thai dancer with participants at opening dinner.

Right: Creating a concept map of stakeholders around antimicrobial resistance.

Bottom: Thumbs up approval from participants at the 2016 GHIT.
Unexpected benefits of animated infographics

Cartoons in the classroom? Some faculty were skeptical when the CMU College of Art, Media and Technology (CAMT) offered to help design short animated infographics to illustrate the OIE Day 1 competencies. Thankfully Rutch Khattiya at the CMU Veterinary Faculty took the risk and jumped at the opportunity. The IT specialists and animators at CAMT know nothing about veterinary medicine, so Rutch created a storyboard describing potential animations for each part of the competency description. Adding English narration and Thai subtitles made these animated infographics come to life.

The CAMT collaborators stressed the importance of keeping animations short, preferably only 2-3 minutes. Animated infographics were completed for Animal Welfare, Communications, Emerging and Re-emerging Diseases and Zoonoses. Response to these infographics has been positive among both students and faculty. The Animal Welfare infographic has been used in several different courses to reinforce the key elements of animal welfare and distinguish it from animal care and husbandry.

Videotaped interviews explain key concepts

The April 2016 International Conference on One Medicine, One Science (iCOMOS) hosted by the University of Minnesota offered visiting Chiang Mai faculty a special professional development opportunity to learn from leading experts on the translation of technical concepts to be understood by the general public. Travel costs were paid by complementary funding to expand the faculty exchanges in the Twinning project.

Two interviews stood out because of their relevance to the first learning objective of OIE Day 1 competency 'communications skills' - communicate technical information in a way that the general public can understand.

Dr. Liz Neeley, a marine biologist, delivered a compelling case for better use of storytelling to communicate science to non-experts. She shared her personal story of trying to share the scientific evidence for climate change with her father, a non-scientist.

Dr. David Fraser, Professor, University of British Columbia, Canada an animal welfare specialist, explained that terminology is one of the principal disconnects between scientists and the public. He uses an animal welfare example that highlights some of the scientific and communication challenges around the terminology used in studying and describing animal welfare.

Both these interviews set the stage for superb classroom discussion about communication skills like understanding the importance of knowing one’s audience and using language they can understand.

Watch the short videos:

- Animal Welfare
- Communications
- Emerging and re-emerging diseases
- Risk Analysis
- Zoonosis

Dr. Liz Neeley
Storytelling to Communicate Science to non-experts

Dr. David Fraser
Terminology Scientists & the Public
Case studies to the rescue!

After six weeks together during the bilateral student exchanges, the 20 participating CMU and UMN students were invited to provide feedback on their learning experience. When asked about their epidemiology course, they pointed out that most of the examples used in class involved food animals even though very few students envision themselves in food animal careers. One of the most common suggestions was “Add case studies on small animals, horses and equine…”

In response to this feedback, an education “mash-up” was held in early June 2016 involving both CMU and UMN faculty. Brainstorming revealed a wealth of potential case studies for pets, horses and wildlife. More importantly, UMN faculty members Peggy Root and Erin Malone promoted the concept of “backwards course design”. The idea is to create the exam first, building on the objectives of the Day 1 competencies. Then the teaching design and materials are created to prepare the students to demonstrate the competencies as they complete the exam. Faculty also recognized that the course title and approach needed to be made more appealing and relevant than ‘Introductory Epidemiology’.

The proof is in the implementation, so we’ll follow closely as many of these ideas come to life in the UMN curriculum beginning in September 2016.

Strengthening curricula step-by-step

Changing veterinary curricula takes time. Beginning with small changes helps build momentum for larger changes. A great example has emerged at UMN where the senior veterinary public health rotation is expanding from one week to two weeks in order to emphasize how the OIE competencies can be used by new graduates. This change follows a series of smaller enhancements precipitated by the OIE twinning project including new lectures, more group exercises and additional emphasis specific day 1 competencies such as on food hygiene.

Changes continue at CMU too. Drs. Terdsak Yano and Panuwat Yamsakul revised their swine diseases course in 2014 to demonstrate the importance of the OIE competencies. Drs. Yano and Yamsakul put more emphasis on experiential learning, with some of the lecture material provided through online learning rather than classroom time. Student feedback proved valuable in further modifying the course for delivery in 2015 and 2016 in order to better meet student needs and align with the OIE Day 1 competencies.

Veterinary Education Twinning’s aims and objectives CMU and UMN:

Our principal objectives are to:

• Strengthen effective veterinary services by aligning veterinary education with the OIE guidelines on veterinary education core curriculum within the framework of the OIE PVS pathway
• Improve the veterinary workforce by ensuring that new veterinary graduates demonstrate compliance with OIE Recommendations on the Competencies of Graduating Veterinarians (‘Day 1 Graduates’) to assure the high quality of national Veterinary Services (Day 1 competencies)
• Deliver continuing professional development for veterinarians working in both public and private components of National Veterinary Services in order to advance knowledge and skills as outlined in the advanced competencies developed by OIE
• Promote the One Health approach for interdisciplinary collaboration in addressing health issues at the human, animal, and environmental interface