

## ABSTRACT: 2013 ELAM Institutional Action Project Poster Symposium

**Project Title:** Learning Design and Faculty Development to Support Innovative Curriculum Redesign: Results of Pilot Year One.

**Name and Institution:** Leslie Fall, MD (Associate Dean for Faculty Development); Geisel School of Medicine at Dartmouth

**Collaborators:** Wiley “Chip” Souba, MD (Dean); Richard Simons, MD (Sr. Assoc Dean for Education); Glenda Shoop, PhD (Director of Curriculum and Evaluation); Steven McAllister, MBA (CTO); Prudence Merton, PhD (Dartmouth Center for the Advancement of Learning); Timothy Lahey, MD (Curriculum Redesign Project Lead).

### **Background, Challenge or Opportunity:**

In June 2011 Dean Souba unveiled his vision for medical education at Geisel and an ambitious plan for an innovative new curriculum. Following a site visit by recognized medical educators, the Redesign Leadership Team was created and charged with curriculum design and implementation leadership. Under the new senior associate dean for medical education, the Office of Medical Education was expanded to include the Office of Faculty Development and an Associate Dean for Faculty Development, as well as a Director of Curriculum and Evaluation. In June 2012 Dean Souba founded the Academy of Master Educators and named the inaugural class. In October 2012 the Medical Education Learning Design (MELD) working group of the Redesign Leadership Team was formed and charged with overseeing the learning design and faculty development for the new curriculum.

**Purpose/Objectives:** To articulate a learning design and faculty development strategic and operational plan to support Geisel’s innovative new medical school curriculum.

### **Methods/Approach:**

The findings of the site visit, in addition to the recently completed Liaison Council for Medical Education self-study and four years of Geisel course and teaching evaluations, provided needs assessment data. Working in collaboration with the Dartmouth Center for the Advancement of Learning, MELD leadership focused year one efforts in two areas: 1) expanding Geisel’s education technology infrastructure by piloting iPads with ninety year 1 students and forty-five year 1 faculty, and hiring a Director of Learning and Technology for the Office of Medical Education; and 2) piloting faculty development programs within the current curriculum in learning design skills and in core teaching skills. Members of the Academy of Master Educators assisted with faculty development efforts.

### **Outcomes and Evaluation:**

**Technology Infrastructure:** Qualitative evaluation of the **iPad Pilot Program** demonstrates strong support by both faculty and students, and a significantly positive impact on faculty and student engagement in teaching and learning. The **Director of Learning and Technology** search committee, led by LF, recommended in March two strong finalists for the position. LF has given two presentations to the Geisel and the DHMC Boards, and now sits on the Dartmouth President’s technology-enhanced education committee.

**Course and Curriculum Design for Active Learning:** Eighteen faculty members attended a two-day **Active Learning Institute**. Post-course surveys show that all Institute graduates implemented at least one new active learning method in their current course design. Similar results were demonstrated in a shorter format for the infectious disease course. Sixty Geisel faculty and staff attended the four-hour **Team-based Learning** workshop; at least three faculty have now incorporated TBL into their course design. Over forty faculty attended a **Writing Effective Multiple Choice Questions** workshop and applied learned skills to their course quiz and exams this academic year.

**Effective Teaching, Facilitation and Skills Coaching:** Twelve **On Doctoring Course** facilitators are participating in a yearlong series of workshops designed specifically for this course. Facilitators report application of new skills to their small group teaching – a finding corroborated by a new peer observation program. Pediatric faculty report similar results for the monthly one-hour pilot **Doctor Coach program**. The **Academy of Master Educators** sponsored a workshop on *Delivering an Interactive Lecture* and are developing a workshop on *Flipping the Classroom*.

# Learning Design, Technology and Faculty Development to Support Innovative Curriculum Redesign



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## Objective

To articulate a learning design, education technology infrastructure and faculty development strategic and operational plan to support Geisel's innovative new medical school curriculum.

## Background and Opportunity

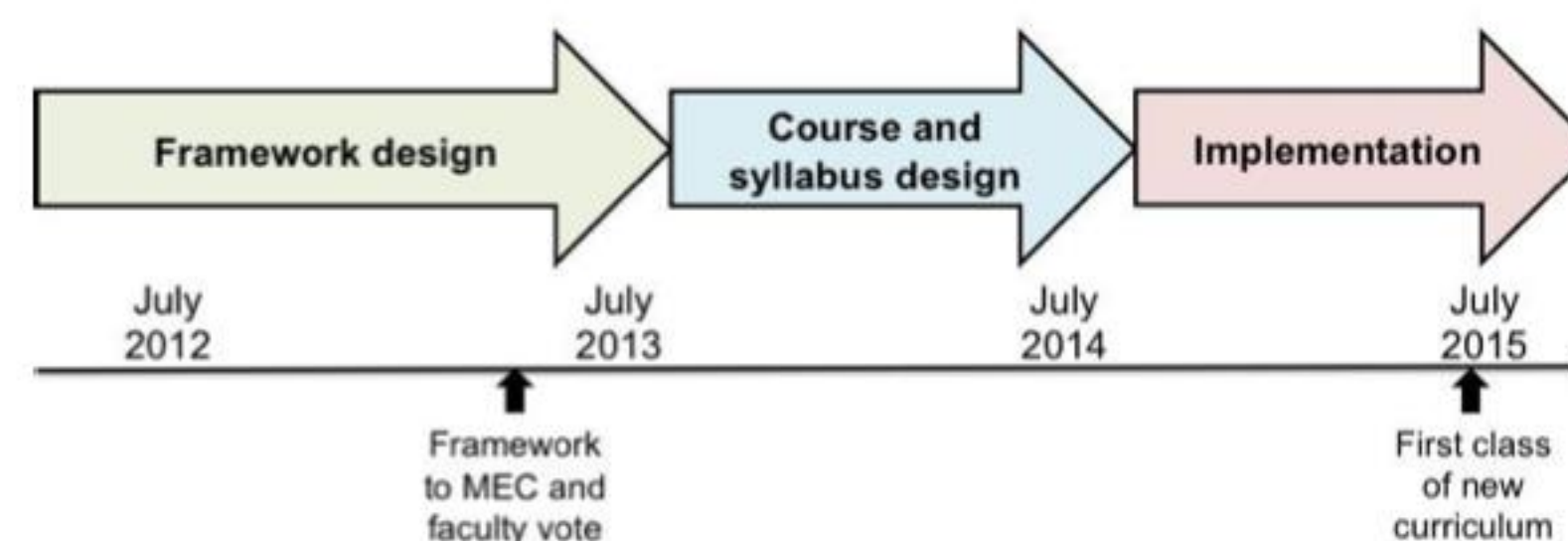
- *June 2011* – Dean Souba unveiled a vision for medical education at Geisel and plans for an innovative new curriculum.
- *October 2011* – Curriculum Redesign Leadership Team appointed and charged with leading all aspects of the new curriculum planning, design and implementation.
- *May 2012* – New Senior Associate Dean for Medical Education recruited and begins tenure.
- *June 2012* – Geisel Academy of Master Educators founded and inaugural class named.
- *July 2012* – New Office of Faculty Development and Associate Dean added to an expanded Office of Medical Education.
- *October 2012* – New Director of Curriculum and Evaluation recruited to the Office of Medical Education.
- *December 2012* – Medical Education Learning Design (MELD) working group charged with leading the learning design and faculty development for the new curriculum.

## Approach – Year One

- **Develop frameworks** for new medical school competencies, for curriculum map and learning design, and for related faculty development programs.
- **Strengthen education technology infrastructure** and profile by distributing iPads to all first year students and a core group of first year faculty, and by building a new Director of Learning and Technology position.
- **Interpret faculty development needs assessment data** provided by outside consultants, LCME self-study and four years of student course evaluations.
- **Expand current faculty development programs** quickly through pilots, in collaboration with the Dartmouth Center for the Advancement of Learning (DCAL) and the new Academy of Master Educators.

## Collaborators

Chip Souba, MD Dean, School of Medicine	Richard Simons, MD Sr. Assoc. Dean for Medical Education
Tim Lahey, MD Director, Curriculum Redesign	Glenda Shoop, PhD Director of Curriculum and Evaluation
Prudence Merton, PhD Dartmouth Center for the Advancement of Learning	Steve McAllister, MBA Director, Geisel Computing



## Outcomes – Year One

- **Curriculum frameworks** iteratively drafted and circulated to core teaching faculty and students for comment; new core competencies and *The Geisel Way* nearing completion.
- **iPads distributed** to 90 students in Geisel '16 class, 30 basic science faculty and 12 year one On Doctoring facilitators.
- **Director of Learning and Technology** search initiated; 20 candidates interviewed and search nearing completion.
- **Needs assessment** data synthesized and demonstrated priority for faculty development on the use active learning and classroom facilitation techniques, clinical skills teaching and more robust education for course designers.
- **Geisel Active Learning Institute** developed in collaboration with DCAL and attended by 18 faculty members.
- **Team-based Learning** workshop attended by 60 faculty/staff.
- **Writing Effective Multiple Choice Questions** workshop attended by over 40 faculty.
- **Small group facilitation and skills coaching workshops** piloted with 12 On Doctoring facilitators over four sessions.
- **Academy of Master Educators** sponsored one workshop on *Delivering an Interactive Lecture* and is developing a second workshop on *Flipping the Classroom*.

## Impact – Year One

- **iPad Pilot Program evaluation** at mid-point demonstrates strong support by faculty and students, and a perceived positive impact on faculty engagement in technology and teaching, and facilitation of student learning.
- **Geisel selected for Apple™ full day site visit** and faculty development program; second visit in the planning stages.
- **Three invited presentations** on technology-enhanced medical education given to the Geisel School of Medicine, Dartmouth-Hitchcock Medical Center and Dartmouth College Boards of Overseers, Trustees, and Trustee Emeriti.
- **Geisel representation sought** for Dartmouth College's ad hoc technology-enabled education committee which reports directly to the President.
- **Invited to co-lead two multi-institutional AAMC workshops** on *Diffusion of Innovation in Medical Education* and *Use of iPads in Undergraduate Medical Education*.
- **Implementation of new active learning methods** into current course design by ten Geisel Active Learning Institute graduates and three Team-Based Learning workshop faculty with significant improvement in student course evaluations.
- **Application of new techniques** in facilitation and skills coaching reported through the On Doctoring peer evaluation program.
- **Required participation** in monthly faculty development program written into Academy of Master Educator membership requirements.

## Next Steps

- **Complete curricular frameworks** for new Geisel competencies, milestones and learning outcomes.
- **Begin design** of competency-based student learning portfolio and related faculty mentor development program.
- **Extend iPad pilot program** into second year faculty and incoming Geisel '17 class; mentor new Director of Learning and Technology to assume co-director role.
- **Complete evaluation of iPad pilot** and submit manuscript.
- **Expand Geisel Active Learning Institute** to include named course designers for the new curriculum.