

## **ABSTRACT: 2013 ELAM Institutional Action Project Poster Symposium**

**Project Title:** A Curriculum Designed for Significant Learning

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**Background, Challenge or Opportunity:** On the 100<sup>th</sup> anniversary of the Flexner report, a new study of physician education called for major curriculum reform emphasizing an integrated model of basic and clinical sciences for medical school education (Cooke, Irby and O'Brien, 2010). While medical educators recognize the need for curriculum reform, the institutional process is not necessarily rooted in evidence. Education models generally utilize the "top-down" approach of defining educational objectives, followed by a focus on student outcomes, but without ensuring that the teaching/learning activities allow the students to meet the goals. In recent years, L. Dee Fink's (2003) "taxonomy of significant learning" has informed higher education curriculum planning. While the Boonshoft School of Medicine (BSOM) has utilized Fink's concepts, including backward design to develop individual courses, utilizing his model as a framework for reforming a medical school curriculum is novel.

**Purpose/Objectives:** The purpose of this project is twofold: 1) use the taxonomy of significant learning as the framework in constructing the educational objectives; and 2) using the concept of backwards design, construct the milestones for each of the educational phases, followed by the identification of the assessment activities, and finally delineate the teaching and learning activities.

**Methods/Approach:** The Wright Curriculum Steering Committee re-framed our educational objectives using L. Dee Fink's taxonomy of significant learning. In doing so, we discovered that his descriptions of significant learning aligned with the six ACGME core competencies. After these educational objectives were completed, work began on drafting the milestones for each of our educational phases (Foundations of Clinical Practice, Doctoring and Advanced Doctoring), which will soon be completed. To determine how to measure each of our milestones, an assessment committee was formed, with a charge to explore the literature for best practices in assessment and give recommendations to the steering committee in the summer of 2013. Concurrently, the Steering Committee will draft guiding principles for use by subcommittees to identify teaching and learning activities in order to achieve the milestones.

**Outcomes and Evaluation:** While this project is still in the early stages, Dr. Fink presented a draft of our educational objectives at an international meeting, and they were well received. Short-term evaluation will include having committee members participate in focus groups to identify the strengths and weaknesses of applying the taxonomy of significant learning to medical education curriculum reform. After the new curriculum is underway in 2015, each year for several years, committee members will convene to determine if the application of the taxonomy of significant learning used to develop the BSOM curriculum was successful in achieving the goals. Information to assist in the process will come from course evaluations, student and faculty focus groups, and course reviews conducted by curriculum committees.



# A Curriculum Designed for Significant Learning

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## Background

- On the 100th anniversary of the Flexner report, a new study of physician education called for major curriculum reform emphasizing an integrated model of basic and clinical sciences for medical school education (Cooke, Irby and O'Brien, 2010).
- While medical educators recognize the need for curriculum reform, the institutional process is not necessarily rooted in evidence. Education models generally utilize the "top-down" approach of defining educational objectives, followed by a focus on student outcomes, but without ensuring that the teaching/learning activities allow the students to meet the goals.
- In recent years, L. Dee Fink's (2003) "Taxonomy of Significant Learning" has informed higher education curriculum planning. While the Boonshoft School of Medicine (BSOM) has utilized Fink's concepts, including backward design to develop individual courses, utilizing his model as a framework for reforming a medical school curriculum is novel.

## Purpose

The purpose of this project is two-fold:

- Use the "Taxonomy of Significant Learning" as the framework in constructing the educational objectives.
- Use the concept of backward design to construct the milestones for each of the educational phases, followed by the identification of the assessment activities, and finally delineate the teaching and learning activities.

## Approach

- The Wright Curriculum Steering Committee re-framed the educational objectives using L. Dee Fink's "Taxonomy of Significant Learning." In doing so, we discovered that his descriptions of significant learning aligned with the six ACGME core competencies. After these educational objectives were completed, work began on drafting the milestones for each of our educational phases (Foundations of Clinical Practice, Doctoring, and Advanced Doctoring), which will soon be completed.
- To determine how to measure each of our milestones, an assessment committee was formed, with a charge to explore the literature for best practices in assessment and give recommendations to the Steering Committee in the summer of 2013. Concurrently, the Steering Committee will draft guiding principles for use by subcommittees to identify teaching and learning activities in order to achieve the milestones.

## WRIGHTCURRICULUM 7 Interrelated Educational Objectives



## Partial List of Learning Goals

Dimensions/Learning Goals	
<b>1. Foundational Knowledge – Medical Knowledge</b>	1.1. Understand fundamental bio-medical concepts, terms, processes, and system interactions 1.2. Understand determinants of health 1.3. Understand the process of evidence based medicine
<b>2. Application – Patient Care (Clinical skills)</b>	2.1. Conduct patient interviews and physical examinations 2.2. Diagnose patient health problems 2.3. Propose evidence based health maintenance and therapeutic options
<b>3. Integration – Systems-Based Practice</b>	3.1. Connect knowledge of patient populations and health delivery processes in making diagnoses and therapeutic recommendations 3.2. Advocate for the humane, just, safe and prudent care of persons 3.3. Adapt to the complex economic and social structure of health care delivery

## Outcomes and Evaluation

- While this project is still in the early stages, Dr. Fink presented a draft of our educational objectives at an international meeting, and they were well received. Short-term evaluation will include having committee members participate in focus groups to identify the strengths and weaknesses of applying the "Taxonomy of Significant Learning" to medical education curriculum reform.
- After the new curriculum is underway in 2015, each year for several years, committee members will convene to determine if the application of the "Taxonomy of Significant Learning" used to develop the BSOM curriculum was successful in achieving the goals. Information to assist in the process will come from course evaluations, student and faculty focus groups, and course reviews conducted by curriculum committees.

## Next Steps

- Steering Committee to meet biweekly in order to focus greater effort on this process; develop guidelines for Task Forces regarding teaching/learning methods
- Review report from the Assessment Committee
- Identify members of each content task force; reports expected back to the Steering Committee within six months
- Pilot project of Early Clinical Experiences
- Pilot project of integrated neurology/internal medicine clerkship

## Backward Design Template for Creating Milestones and Identifying Assessments and Teaching/Learning Activities

Dimension 5: Caring/Valuing – Professionalism			
Goals			
5.1. Care deeply about becoming an excellent physician			
5.2. Care and support others in the profession			
5.3. Value and behave in a manner consistent with the highest ethical standards of the profession			
Goal 5.1			
5.1. Care deeply about becoming an excellent physician			
	Phase 1 Foundations of Clinical Practice	Phase 2 Doctoring	Phase 3 Advanced Doctoring
<b>Milestones 5.1</b>	Demonstrate effective written and oral communication skills as they relate to patient and self-care	Demonstrate commitment to (1) personal and professional improvement; (2) collaborative skills in a team-based dynamic; and (3) self-identification and rectification of gaps in clinical and professional training.	Apply advanced skills of self-reflection and interprofessional team leadership in the care of patients in a specialty of his/her choosing.
<b>Feedback/Assessment 5.1</b>	Graded self-reflections; written articulation of personal growth/professional goals (code of professional standards); OSCE ("difficult conversations," medical errors etc.); ICM; early clinical experiences; TBL (focus on professionalism)	Professionalism assessment in the clerkships; 360 degree evaluations (2-3 per year, blinded to the student); peer evaluations; graded self-assessments with the written articulation of professional goals and steps to improve; required/assessed career guidance meetings with mentors/advisors; "pullback session" exercises; graded longitudinal self-reflections	Final month/capstone/residency prep; Professionalism assessment in sub-internship; peer evaluations; graded self-assessments with the written articulation of professional goals and steps to improve; career guidance meetings with mentors/advisors; graded longitudinal self-reflections
<b>Teaching/Learning 5.1</b>	Orientation focus professionalism and self-care; ICM focus on professional boundaries and communication; Medical ethics focus on the philosophy of medicine/professionalism in practice	Clerkship teaching/mentorship; graded longitudinal self-reflections; interdisciplinary TBLs/case reviews	Residency preparation in the last month; Clinical teaching/mentorship; graded longitudinal self-reflections; interdisciplinary TBLs/case reviews



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