



Carnegie Foundation Studies of Preparation of  
Professionals, Educating Nurses: A Call for  
Radical Transformation

University of Pittsburgh Medical School  
April 9, 2010

Patricia Benner, R.N., Ph.D., FAAN

Molly Sutphen, Ph.D.

Lisa Day, R.N., C.N.S., Ph.D.

Victoria Wynn Leonard, R.N., F.N.P., Ph.D.

Lori Rodriguez, Ph.D.

William Sullivan, Ph. D., Anne Colby, Ph.D. and Carnegie  
Scholars

## Three Cross-Professional Frames for the Five Carnegie Studies of Professional Education

- **First: Civic Professionalism** rather than technical professionalism: Focus on civic responsibilities to clients and society rather than on “technical professionalism” i.e., autonomy; control over knowledge development and participants in the profession.

# Second Framework: The Three professional Apprenticeships

- Cognitive Apprenticeship: Knowledge of Science, theory, principles required for the practice.
- Practice Apprenticeship: Clinical Reasoning; Practice know-how; situated knowledge use.
- Formation & Ethical Compartment Apprenticeship: Learning to **embody** and **enact** the notions of good internal to the practice.

## A Third Framework Evolved From the Studies: Teaching a Practice Requires...

- Experiential teaching and learning
- Situated cognition—Thinking-in-Action (The logic of practice)
- Developing a Sense of Salience...Recognizing the nature of Clinical Situations
- Situated teaching and learning (Readiness)
- Reflection on particular cases and situations
- Development of ethical comportment (In dispositions and actions, not just beliefs and decisions)

# Key Findings

- Major Practice-Education Gap
- Radical Separation of Classroom and Clinical Teaching
- Faculty Development Needed for Classroom Teaching

# Major Paradigm Shifts in Nursing Education

- **New Ways of Thinking about Teaching a Practice:**
  - FROM a Primary Emphasis on Critical Thinking TO.... Multiple Ways of Thinking with an Emphasis on Clinical Reasoning

## Critical Thinking is Necessary, But Not Sufficient in a Practice Discipline

- Problem of Conflating Critical Thinking and Clinical Reasoning.
- Critical Thinking and Reflection for Critique and Deconstruction are essential but Nurses and Physicians Need a Way to Act and Use Established Knowledge in Rapidly Moving Situations. See Sullivan and Rosin *A New Agenda for Higher Education*. (2009) Jossey-Bass/Carnegie

## Critical Thinking Essential for Problem Areas and Received Knowledge that No Longer Works

- System Redesign for Patient Safety.
- New Patient Populations with Novel Problems, e.g., Poly Trauma Patients from Combat in Iraq and Afghanistan. (Creative and Critical Thinking Needed).
- Recurring clinical problems with specific patient populations.

# Clinical Reasoning a Type of Practical Reasoning, Phronesis

Reasoning across time about the particular through transitions in Clinician's understanding and in the patient's condition.

# Scientific Reasoning

- Snapshot or formal criterial reasoning used for scientific experiments.
- Prudent Use of Evidence-Based Practice
- Nurses and Physicians are science *Using Practitioners*.

# Wisdom requires engagement and attentiveness

- Time and interest in the patient's concerns, and clinical condition are essential to exercise astute clinical judgment.
- Noticing, and remembering are based upon relationship and attunement.

# The Greek term from Aristotle: Wisdom is Phronesis

- Phronesis requires wisdom.
- Both may be understood as wise judgment, action and craft in particular situations.
- Phronesis is embedded in a practice, just as are notions of good.

# Phronesis:

- Underdetermined situations.
- Experiential learning involved.
- Praxis, skill, character development.
- Mutual influence may be involved.
- Pre-specified outcomes cannot be reliably predicted.

# Phronesis is distinct from “techne”

It is impossible to reduce phronesis or wisdom  
to standardized procedures or “techne.”

# Techne (Aristotle, Dunne)

- Producing or making things.
- Can be standardized.
- Outcomes predictable.
- Separating means and ends *not* a problem with techne.

# The Nature of Practice cont.

- It is impossible to make the knowledge embedded in practice completely formal, completely explicit.
- Much clinical knowledge is only elicited by the situation...it is context dependent.

## Paradigm Shifts:

### **New Ways of Thinking about Teaching a Practice**

- FROM Curricular Threads/Competencies  
TO..... Integration of the Three High-End  
Professional Apprenticeships and  
Integration of the Classroom and  
Clinical Teaching/ Knowledge acquisition and  
knowledge use

# Rethinking Curricular and Pedagogical Integration

- Integrating knowledge acquisition and knowledge use
- More than “teaching about” a practice or discipline is needed...moving beyond a survey-overview of knowing about and knowing that
- Integration requires teaching how to think, and act in particular under-determined, often ambiguous situations

# Integrating Classroom and Clinical Teaching and Learning

- **Classroom:** Situate science, theories, technology and ethics in practice examples, unfolding cases, case studies, clinical puzzles
- **Clinical, Simulation and Skills Lab:** Situate learning evidence based nursing practice in care of particular patients

# Deep Learning: Less is More

- Integrating knowledge acquisition and knowledge use in practice requires choosing commonly recurring clinical problems, illnesses and public health promotion issues
- Deep learning strengthens clinical inquiry and clinical imagination
- Avoid pedagogies of cataloguing

# Student Experiences

- Overloaded and overwhelmed
  - So much to learn in such a short time.
  - The most challenging thing is all of the mountains of information that just has to be completely committed to long-term memory. Remembering normal lab values and drug dosages is very hard for me.

# Integrative Teaching

Teach students:

- to recognize the *nature* of whole clinical situations
- use multiple frames of reference in particular clinical situations, e.g., allopathic medicine; psycho-social aspects of illness; patient concerns, recovery processes and patient well-being

# Integration of the Apprenticeships

- Best taught in both the clinical and classroom settings
- Pressure to separate the teaching of the three apprenticeships
- Once separated, it is difficult to bring the apprenticeships back together

# Rethinking Integration Through Curricular Strategies and Pedagogies

- Threading knowledge and process content across the curriculum is designed to help students integrate their knowledge from natural and social sciences and humanities.
- The goal is to organize the curriculum to cover larger amounts of material within the existing course and unit structure of the nursing program.

## Rethinking Integration Through Curricular Strategies and Pedagogies

- “Threading Curricular strands can dilute focus and content expertise of the teachers. For example cultural competency, nutrition or ethics may become marginalized and taught at a superficial level, despite the goal to emphasize them in all the courses.
- Teachers tend to emphasize their own area of knowledge.

## Rethinking Integration Through Curricular Strategies and Pedagogies

- One of the difficulties on integrating knowledge acquisition and knowledge use is that knowledge and skills required in practice come from diverse domains of knowledge and it is tempting to take a hierarchical or reductionistic approach to integration, allowing one knowledge discourse to trump all others. This approach blocks integrative learning.

# Major Paradigm Shifts in Nursing Education

## **New Ways of Thinking about Teaching a Practice:**

FROM abstract theoretical classroom teaching and *application of* that theory

TO .... Teaching for a Sense of Salience and Situated Knowledge Use, Teaching an Interpretive Dialogical *Use* of Theory in Practice.

# Teaching for a Sense of Salience

- Developing a Sense of Salience for what stands out as more or less in unstructured, under-determined, open-ended clinical situations
- A built-in crisis in continuing to break complex situations down into simple parts
- Developing a Sense of Salience in particular clinical situations requires integrating and embodying domain-specific knowledge

# Developing a Sense of Salience

Clinical reasoning, a form of practical reasoning requires understanding the nature of the situation across time (Bourdieu, 1990)

Because nurses work in complex, relatively unstructured clinical situations they must learn to quickly recognize and assess what is most and least important, or what is most salient.

Developing a sense of salience requires situated learning that is experiential and gained over time (Lave and Wenger 1991)

# Teaching for a Sense of Salience

- Ongoing situated coaching is required for the student to grasp changing relevance, and demands, resources, and constraints in particular situations.
- Pattern recognition and family resemblances between clinical situations allow students to develop and enrich a sense of salience over time.

# Teaching for a Sense of Salience Through Situated Coaching

- A sense of salience enables students to *notice* (drawing on their background understanding of past similar and different situations) essential actions and concerns in particular situations
- A sense of salience enables students to focus their attention on the most noteworthy aspects of the situation.
- A sense of salience enables the student to link perception and discernment with knowledge use drawing from a rich experiential and scientific knowledge base

# Unstructured Clinical Situations

- Unfolding case studies
- Problem based learning...building in “recognition of the nature of the clinical situation” and developing a sense of salience (rounds in Osler’s inductive style of “bedside teaching of clinical observation and clinical imagination. )

## Major Paradigm Shifts in Nursing Education: **Formation and Ethical Compartment**

- Beyond “socialization”
- Experiential learning that creates new capacities to “see” and to “act”
- Contemporary metaphor in nursing is dance, relational, situated and attuned... not being “molded” in rigid forms

## *Pedagogies of Formation:*

- Embodying a practice requires forming a habitus in Bourdieu's words, a sedimenting layers of meaning and comportment in the skillful social body.
- Metaphor for Formation: Dance, Relational, attuned, skillful

## *Pedagogies of Formation:*

- Vision and discernment ...cultivating a clinical imagination.
- What kind of disclosive spaces do clinician's communication and relational practices open up?

# Examples of Student Nurses' Ethical Concerns:

- Meeting the patient as a person
- Preserving dignity and personhood of patient
- Responding to sub-standard practice
- Advocating for patients
- Engaging fully in learning to do “good” nursing practice