Experiential Learning and Situated Cognition
Unive
Dalhousie University,
Halifax N.S.

Based on Carnegie National Study and Research on Skill Acquisition and Clinical Reasoning (Novice to Expert and Clinical Wisdom)

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What’s Ahead for Improved Learning Outcomes??

• Revolution in Neuro-Cognitive Science...Neuro-Net
• Representational Mind and Rational Calculation, Out...Embodied Realism and Immersion in experience.
• Skills of Engagement and Human Curiosity are Central
Skilled Know-How

https://www.youtube.com/watch?v=1-rmGy9gWvE

Traditional cognitive theory is “distanced from experience” and divides the learning mind from the world. (Lave, 1996, p. 7).

“the problem of how social and physical context influences individuals’ mental processes is overlooked in educational research.”

*Understanding Practice, Perspectives on Activity and Context* (Chaiklin & Lave, (1996) :
Alva Noe: Out of our Heads (2009)

“The last 25 years have witnessed the gradual shaping of an embodied, situated approach to the mind…”

“But this has been ignored in neuroscience, in mainstream linguistics, and, more generally in the domain of consciousness studies.”
In addition to the theoretical grids of measurable aspects and features of the mind, we need descriptive language, and disclosive practices that allow middle terms between mind and brain to show how we are immersed in the world:
Middle Terms Between Mind and Body

• Perceptual grasp, embodied intentionality, common taken for granted background meanings, habits, rituals, practices, narrative historical self and world understandings, and other social realtionships, concerns and meanings that constitute our lifeworld.

• Immersed real embodied
Authentic Inquiry Oriented Learning

• We must teach for curiosity, understanding, and the natural desire to know and solve puzzles.

• In our best teaching practice, we look for learning because of given curiosity, not because of will alone, or primarily.
Logic of Clinical Practice is different than the Logic of Narrow Rational Technical Model: Both General and Particular Knowledge are Required

- **General** = Explanation Evidence Based Findings
- Detached Snap Shot Reasoning
- Aggregated Cases Used
- Fabrication of Cases Based on Means for Explanation not a Problem
- Aggregated means about objective elements.
- Comparisons of Means, and Frequency in aggregated cases.
Clinical Expertise Requires Reasoning Between the Particular and General

- **Particular = Understanding in the Clinical Situation**
- Engaged Thinking and Action across Time
- Particular Cases Required
- Fabrication of Patient Responses creates a problem
- “Singular Universal” Paradigm Cases needed for understanding
- Commonalities, Similarities and Contrasts between real whole cases
Skills of Engagement Based on Understanding and Compassion are Essential to Expertise

- Skills of engagement vary with different professionals...teachers, social workers, nurses, physicians, lawyers.

- Without appropriate levels of skills of engagement, relational skills e.g. (attentiveness, understanding, recognition practices, openness and communication) no professional can become expert at their craft.
Explanation AND Understanding

• Explanation for science methodologies and Disciplinary Knowledge.
• For knowing “that” and “why”
• Characterized by formal models of causality and inter-connectedness of variables in science, and tenets in Philosophy, Theory, Science, Technology
And Understanding

- For Knowing how, when for the sake of what, in order to accomplish or understand what?
- Skilled know-how and perceptual grasp are essential
- Situated knowledge use
- To teach for practice: get beyond a narrow rational technicality to a broader understanding of rationality
- Clinical Reasoning---Practical Reasoning
Developing A Sense of Salience

- Based upon deep background understandings of a situation...family resemblances and/or recognition between commonalities within situations

- Becomes more tacit over time with discernment based experiential learning

- Recognizing the nature of the situation is at the heart of good clinical reasoning
Use Multiple Modes of Thinking

• Clinical Reasoning....Reasoning across time about the particular through changes in the patient/situation and or changes in the clinicians’ Understanding

• Patient Response-based thinking

• Diagnostic Reasoning

• Creative thinking
Use Multiple Modes of Thinking

• Discernment, and Insight: Clearing up false assumptions, wrong understandings of the situation

• Critical Thinking...for breakdown, defunct problem solutions, novel problems

• Take the action step. Where, when how?

• Reflection, evaluation, and improving actions for next time
Why the Critical Thinking Agenda in Higher Education is Necessary but not sufficient: Clinicians need a place to stand and a way to act!!

- A positive project...a cumulative science, and error-reducing historical understandings.
- Evidence based practice
- Clinical wisdom and good reasoning and situated judgment to use evidence wisely
Experience Situates the Novice & Expert Nurse Differently

Learners at different levels of skill literally dwell in worlds with different affordances, different possibilities of perceptual grasp, moral perception, moral agency, forethought, and different skillful responses.

What You Attend to, What you notice as Background and foreground are quite different at different skill levels.
Cross-Professional Frames for the Five Carnegie Studies of Professional Education

Teaching a Practice Requires:
- Experiential teaching and learning
- Situated cognition—Thinking-in-Action (The logic of practice)
- Situated teaching and learning (Readiness)
- Reflection on particular cases and situations
- Development of ethical comportment (In dispositions and actions, not just beliefs and decisions)
The Three Professional Apprenticeships

# 1. The Knowledge, Science, Theory of the Profession
# 2. Clinical Reasoning & Practice Knowledge
The Three Professional Apprenticeships

# 3 Ethical Comportment and Formation: Learning to embody and enact good practice in specific situations.
Solving the unique problems of teaching student nurses to... “think and act like a nurse”
The Cognitive Apprenticeship

Findings:

- Uneven and often inadequate teaching in the cognitive apprenticeship across types of schools

- High variability in cognitive apprenticeship found across types of nursing schools
The Cognitive Apprenticeship

• Catalogues and taxonomies
  – Impact was to give descriptions of classifications of diseases without strategies for approach or access to the material except description
  – Consequences for access to practical reasoning

• Maxim: “Subsuming things under categories is not the same as productive thinking.” Logstrup
Student Experiences

“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.”
Student Experiences

I have given up on trying to read the overwhelming textbooks’’
Deep Learning: Less is More

• Integrating knowledge acquisition and knowledge use in practice requires choosing commonly recurring clinical problems, illnesses and public health promotion

• Strengthen clinical inquiry and clinical imagination

• Avoid pedagogies of cataloguing
Integration of Knowledge Acquisition and Knowledge Use

Requires Situated Coaching
Unfolding Case Studies and Patient-Based Nursing Interventions...

- Titration and Adjustment of Interventions
- Learning from Authentic Cases...how the patient’s condition changes over time
- Developing a Clinical Grasp of the Nature of the Clinical Situation over Time
Situated Coaching
The Role of Narrative in Articulating Practical Knowledge:

• Narratives can capture what is universal in a particular clinical or human situation. The person telling a story about their practice experience may reveal more than they intend, or even have direct access to.

• The logic of practice may be opaque to the practitioner. Narrative and observation may capture what is only dimly understood.
Teaching a Practice

• Practical reasoning = Clinical Reasoning
  – Clinical reasoning is reasoning across time about the patient’s changing condition and/or changes in the clinician’s understanding

• Development of ethical comportment
  (In dispositions and actions, not just beliefs and decisions)
The Apprenticeship of Clinical Reasoning and Clinical Judgment

It is difficult for students to learn to use knowledge when clinical and classroom teaching and learning are separate.
Developing a Sense of Salience

The Important stands out

- Experientially Learned
- Situated Coaching is Essential for the Novice
- Addresses the Limits of Formalism in an Under-Determined Situation
- Enables recognition of the whole situation
Implications for Teaching a Practice

- Recognizing the Nature of the Whole Clinical Situation Crisis in Building situation up element by element...Simple to complex maxim
- Practice Disciplines Require Situated Practical Reasoning across Time Which is More than Just “Critical Thinking”
- Narrative Understanding of How Clinical Situations Evolve Over Time is an Essential form of Reflection and Learning from Practice, Particular cases.
Developing Clinical Imagination

• Requires Nurse-Specific Skills of Involvement

• Is Relational and Requires Attunement
The Apprenticeship of Clinical Reasoning and Clinical Judgment

• Pedagogies of being with and responding to suffering are excellent in the clinical teaching and almost absent in classroom teaching.

• Students describe transformative experiences of learning from patients but faculty do not often attend to or extend this rich source of learning.

• The “added value” of time for nursing care for the student nurse fosters integration of the apprenticeships.
Student Experiences

Integration of classroom and clinical is uneven:

“Some students are lucky enough to obtain a clinical instructor that also teaches the course. Then the course objectives and content are better facilitated with direct "clinical setting" examples. Example might be an instructor teaching, "Remember we talked about this subject in class ... here is a prime example of that lecture in the clinical setting." This exampling solidifies classroom taught information.”
The Apprenticeship of Formation and Ethical Comportment

An apprenticeship to the ethical standards, social roles, and responsibilities of the profession, through which the novice is introduced to the meaning of an integrated practice of all dimensions of the profession, grounded in the profession’s fundamental purposes.
Formation

• Beyond “socialization”

• Experiential learning that creates new capacities to “see” and to “act”
The Apprenticeship of Formation and Ethical Comportment

- A pervasive concern in classroom and clinical practice

- Language of “Bioethics” not relational and particular enough to capture ethical concerns of nursing students

- Students imagine ethics as abstract principles, and often do not recognize when their concerns in practice are ethical concerns
The Apprenticeship of Formation and Ethical Comportment

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
Developing Moral Imagination and Ethical Comportment

• Can the student imagine taking up the practice given the pedagogies used?

• Can the student recognize problems or issues in everyday ethical comportment?