

# **Medicine as an Artful Science: The Genre of Case Presentations**

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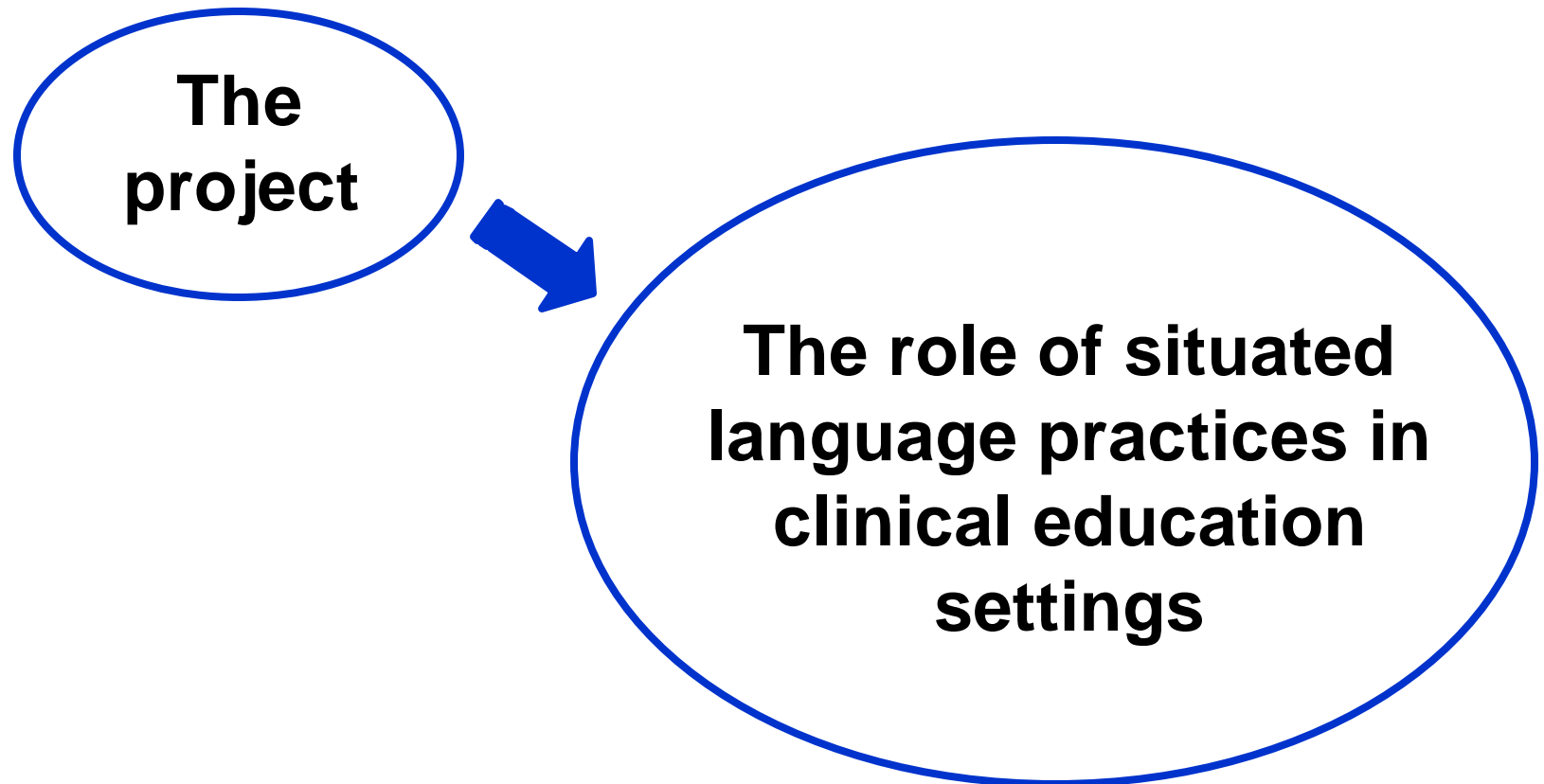
University of Waterloo

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# Creating the Healthcare Professional

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# Creating the Healthcare Professional

- **Principal Researchers**

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- **Assistant Researchers**

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# Questions

1. How do situated language practices (SLP) affect novice health care professionals?
2. What roles are being constructed through these practices?
3. Are SLP's tacit? Contradictory?
4. How does one set (genre) of SLPs -- **the case presentation** -- affect the socialization of healthcare professionals?

# Objectives

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- **To describe the pivotal SLPs occurring in clinical settings as novices present cases in the presence of experts**
- **To analyze this set of SLPs to see if and or how they construct professional identities**

# Theoretical Orientation

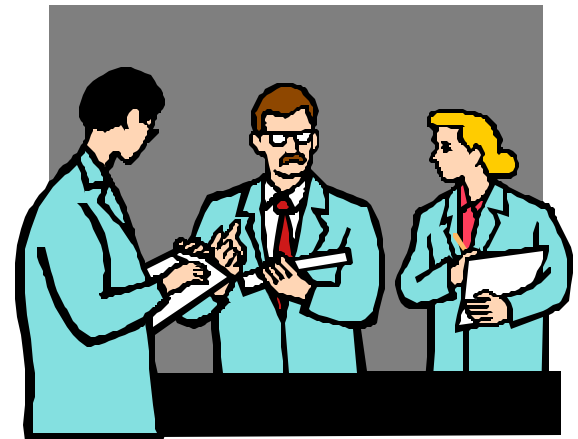
- **Structuration Theories**
  - Giddens, Bourdieu
- **Genre Theorists**
  - Miller, Bakhtin, Hanks, Freedman and Medway
- **Theories of Rhetorical & Discourse Analysis**
  - Burke, Halliday and Hasan, Hodge and Kress

# Genre- Definition

- Constellations of **regularized, improvisational strategies** triggered by the interaction between **individual socialization** or “habitus” and an **organization** or field
- Trajectory entities through which participants negotiate their way through time and space
- Jazz

# Genre of Medical Case Presentations

- Chief Complaint (CC)
- History of Present Illness (HPI)
- Past History
- Family History
- Social History
- Physical Exam
- Diagnostic Impression including Plan





# Status of Study

## Medical Students

- ✓ Data collected
- ✓ Data analyzed

## Optometry Students

- ✓ Data collected
- ✓ Data analyzed

## Social work students

- ✓ Data collected

# Methodology

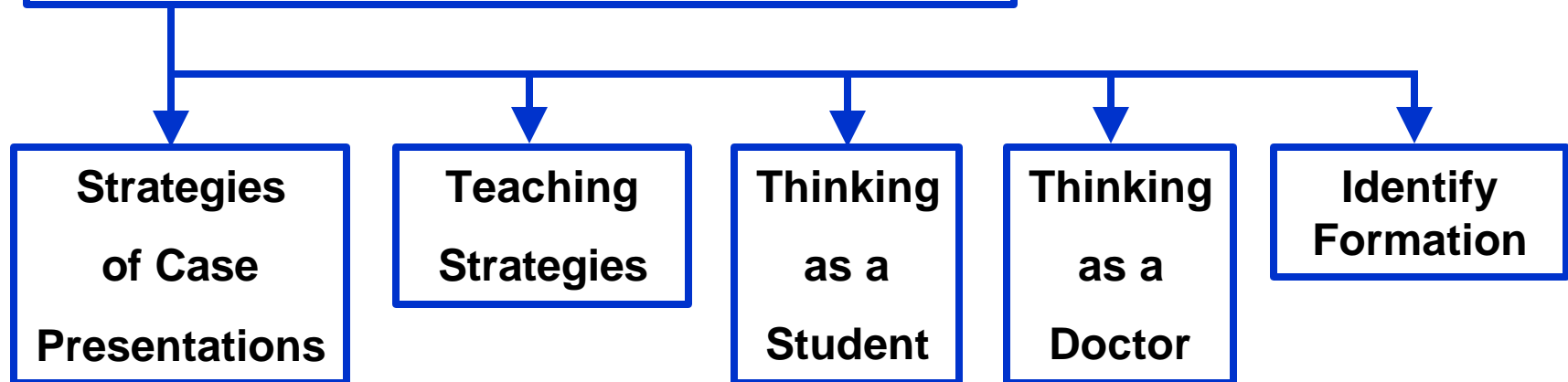
- **3 case studies:**
  - **Medicine, Optometry & Social Work**
- **Novice case presentations in a clinical rotation**
- **Data collection:**
  - **case presentations (audio-recorded/transcribed)**
  - **participant interviews (audio-recorded/transcribed)**
  - **document collection**
- **Qualitative data analysis techniques and tools**

# Medical Student Study

- 3rd year medical students
  - pediatric rotation in urban children's hospital
- 16 case presentations (CPs)
- 21 interviews (with video prompts of CPs)
  - 11 medical students (clerks)
  - 10 instructors (pediatricians)

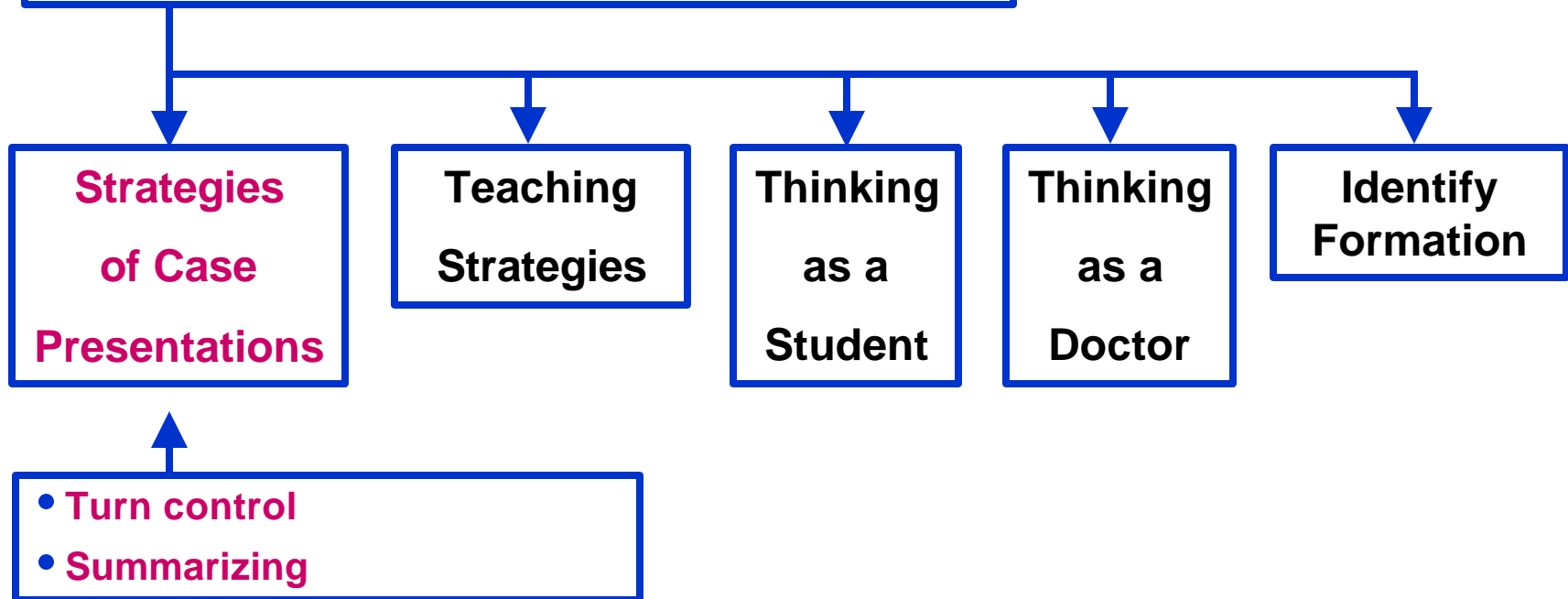
# Results

## Case Presentation Moves



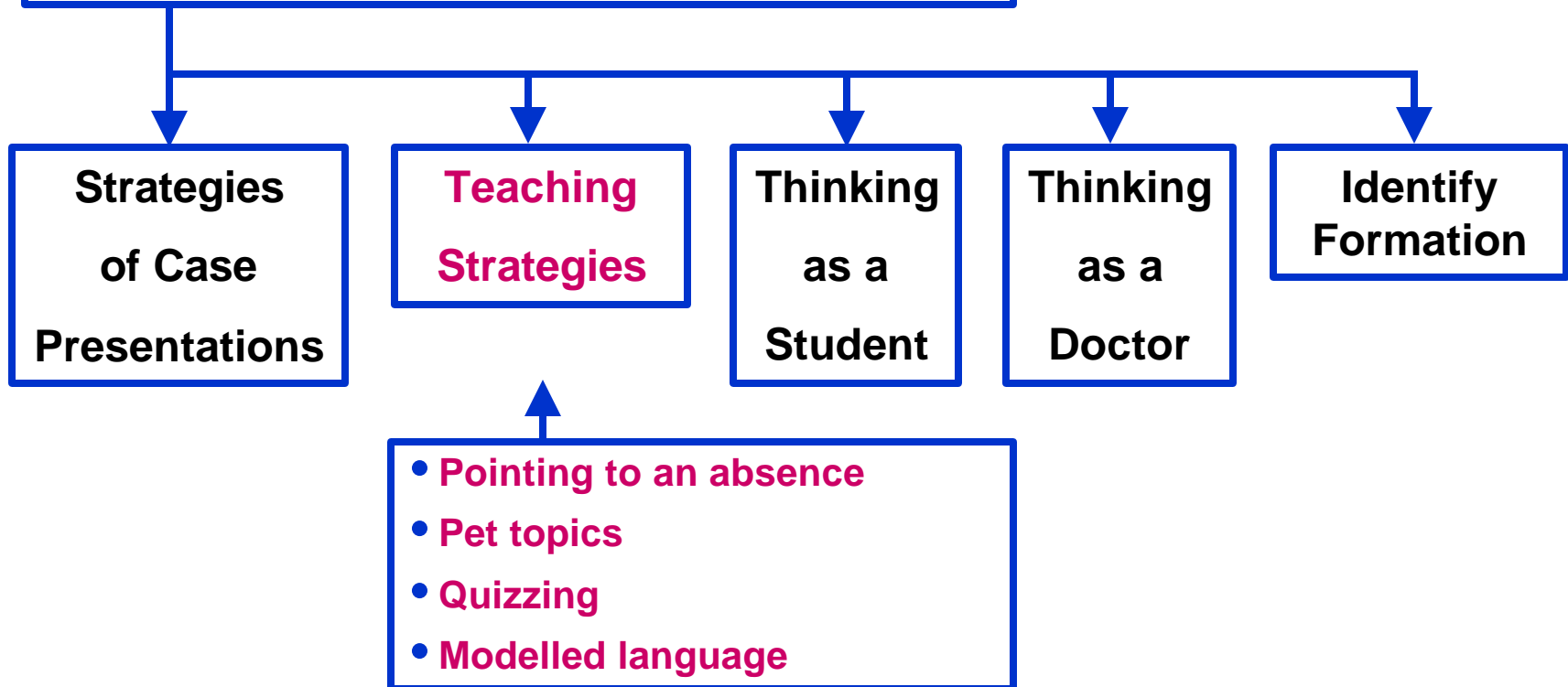
# Results

## Case Presentation Moves



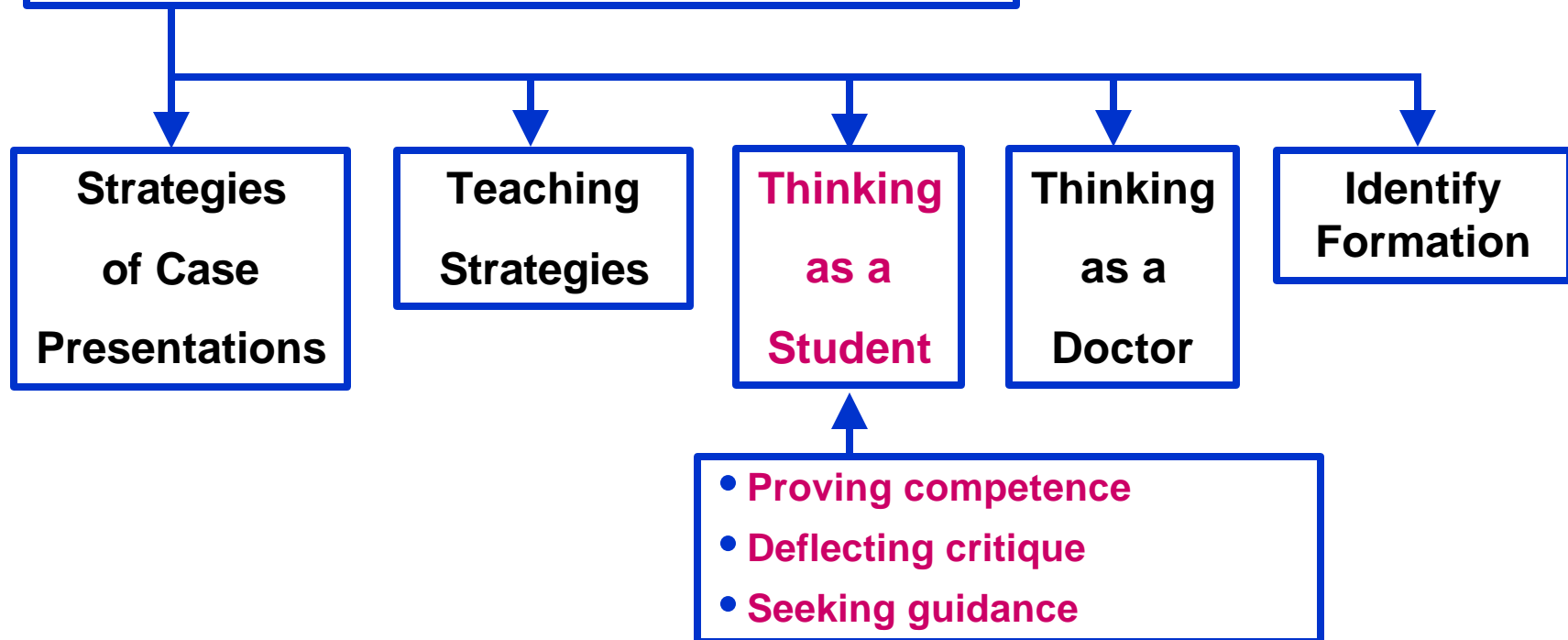
# Results

## Case Presentation Moves



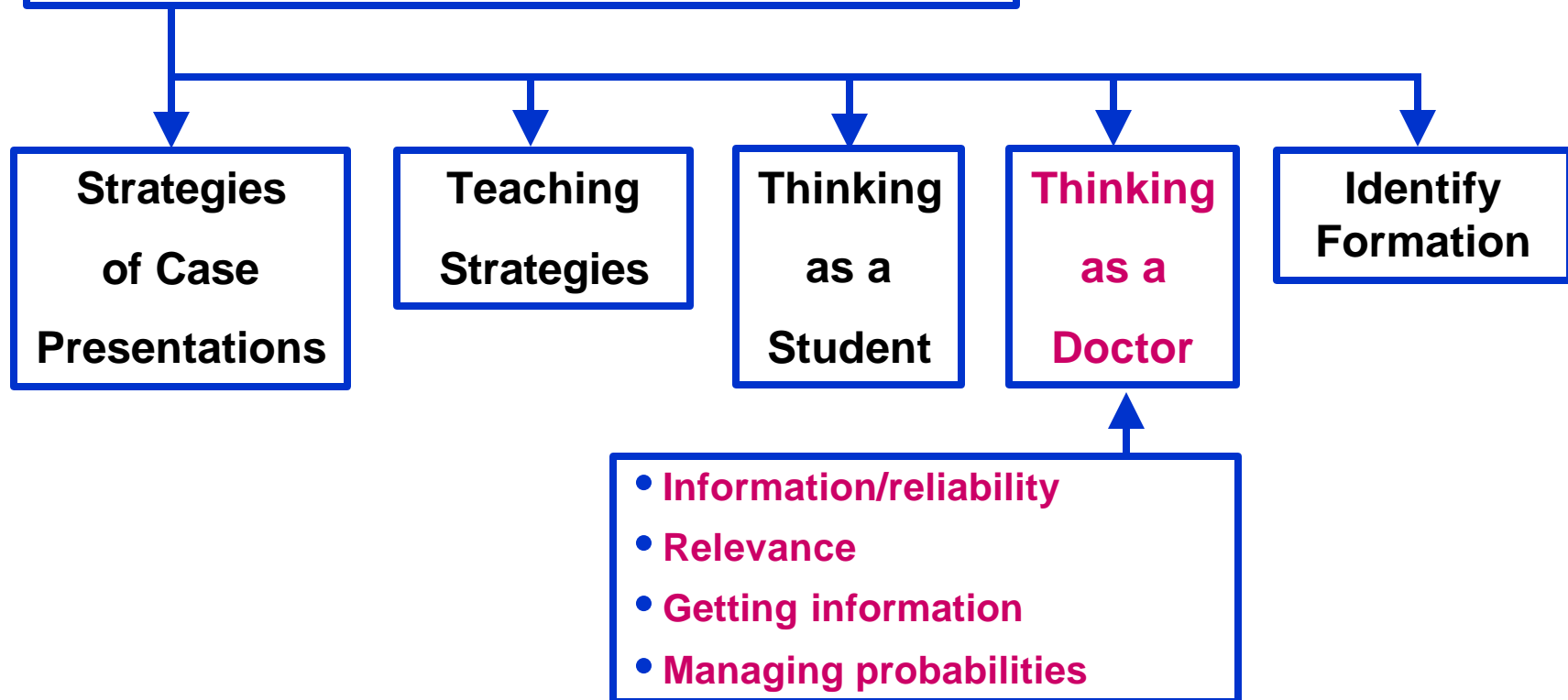
# Results

## Case Presentation Moves



# Results

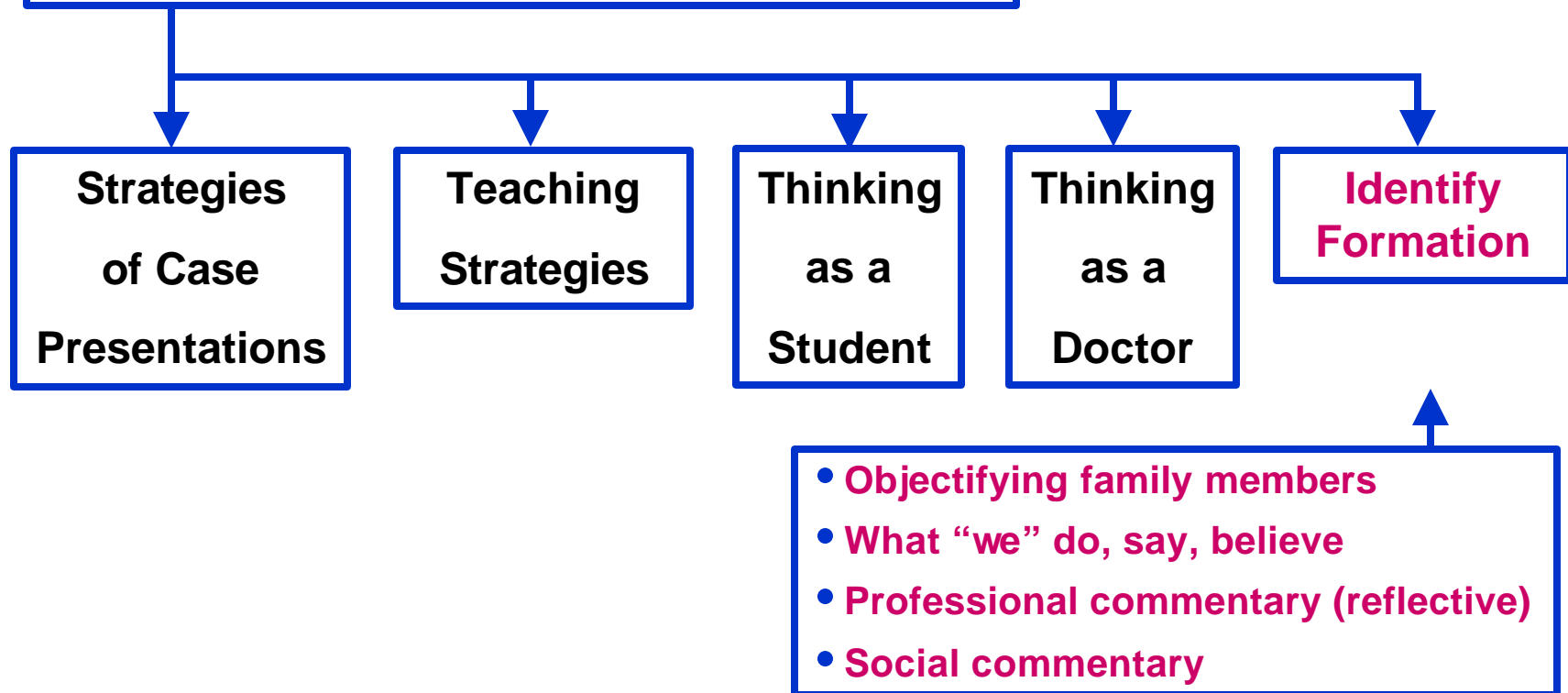
## Case Presentation Moves





# Results

## Case Presentation Moves



# Identity Formation

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- Negotiation of agency between generations
- Formation of professional beliefs & behaviour

# Hippocratic oath

“I swear by Apollo...that I will carry out, according to my ability...this oath and this indenture. To hold my teacher in this art (**techne**) equal to my own parents...to consider his family as my own brothers and to teach them this art...; to impart precept, oral instruction...to my own sons, the sons of my teacher and to indentured pupils who have taken the oath, but to nobody else.”

# Techné -- General Definition

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- Science?
- Art?
- Artful Science?

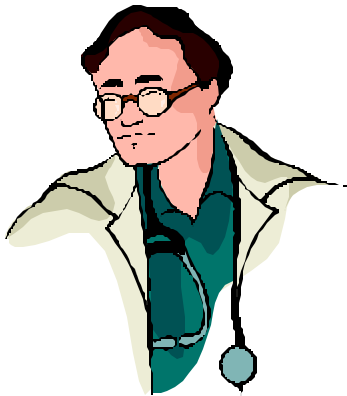
# **Techné 1:**

## **Certain knowledge**

- Determinate subject matter
- Subject matter is a complex conceptual whole that can be analyzed into discrete parts, the recombination of which is clearly delineated by rules
- Possession of this techné yields complete mastery of the subject matter
- Teachable

# What “We” know

**DOC:** “...So post-infectious is sort of a broader...they used to call it post-strep nephritis, but **we know** that other infections can also cause it...”



# **Technique 1: Quizzing, Socratic Questioning**

- Testing for knowledge
- The information should be lodged in memory

# Techne 1:

## Socratic Questioning

**DOC:** “Okay, so there—those are the first generations, and the big second generation we use is cepheroxin. And we talked about this the other day. What does cepheroxin do better than —”

**CLERK:** “What does it ....?”

**DOC:** “Do better than...?”

**CLERK:** “Do better...?”

**DOC:** “Than—why did you choose cepheroxin for this boy, rather than, um —”

**CLERK:** “It’s...the coverage ...of... (pause) staph?”

**DOC:** “No actually enceph and cephzolin and keflex have very good staph coverage.”

**CLERK:** “It’s - it’s h-flu.”

**DOC:** “H-flu. Right...”





# What “We” Say

**CLERK:** “And she was past 34 weeks. So I guess she would have been overweight.”



**DOC:** “We don’t use the term overweight. We tend to talk about LGA.”



Specific terms that index competency

# What “We” Do

**DOC:** “Usually what **we do** is like when we’re ordering masks – especially for asthmatics...I just worry sometimes when we order masks, if they [nursing staff]...give them automatically. They don’t think about whether or not the patient needs them. They just keep giving them...”



Quote continues...

# What “We” Do

**DOC:** “...But I mean if it’s ordered Q2, the nurse is supposed to give them Q2...and usually what we do is...order a Q1, Q1/2 PRN and once they start not needing the half hourly mask, then we switch them to Q2 with Q1.”



# What are students learning?

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- The impression of uncertainty ought to be avoided at all costs
- Distrust of patient language
- Professional boundaries

# Techne 2

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- Organized medical ways of seeing the world that emerge in specific situations

# Techne 2 : Improvisational

- A determinate but not rigidly fixed or invariable subject matter  
e.g., the human body
- Reliable, but not totally; “Rules of thumb” rather than rigid rules;  
Requires appropriate responses to particular occasions
- Teachable but not reliably; Taught and learned in specific  
situations; Messy; Requires experience
- Domain of human intervention; Teaches logical forecasting
- Domain of human invention; Frequently challenges Techne 1  
e.g., the known, rules, etc

# The Uncertain “We”

**DOC:** “But you know if you are really stuck...I’m not embarrassed to say to someone ‘I don’t know what this is’. Show me the thing and I can go and look it up.”



“We” have limits...

# “We” question

**DOC:** “Okay. Now I think a lot of us are taught that if you have inspiratory crackles, that’s pneumonia. If you have expiratory wheezes, that’s asthma. I guess the reality in my experience is that it tends to be more like a crackling sound.”



Question received knowledge  
in specific cases...



# The “Savvy We”

- Pertain to statements regarding:
  - Intervening at the best possible moment
  - Adjusting treatment according to the case

# The “Savvy We”

**DOC:** “Well, I guess you know there’s nothing black and white in terms of making a diagnosis of pneumonia...especially with asthmatics. I guess one is the interpretation of the X-ray and the critical status...this happens all the time. We change antibiotics from Emerg...or we’ll discontinue it, or add it. I mean it really depends on what is happening.”



# Reflective commentary: Phronesis

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- Ethical statements related to a specific case
- Situated ethical decisions in the light of uncertainty
- Assuming responsibility despite uncertainty

# Phronesis

**DOC:** “Thoughts about that? Treating? We’re often caught ...Certainly what we want to avoid in circumstances like this where you’re caught, and you’ve started treatment, it’s not, at this point putting her at high risk to treat her. She seems to be doing well. I think what we need to do is go back ... simply come up with a solution we’re comfortable with. It’s not unusual that we face those decisions. Do we stop an antibiotic or not?...”



**Quote continues...**

# Phronesis

**DOC:** "...You know, there's a fair amount of art in deciding how you weigh that off, not to create disruption but at the same time avoid unnecessary treatment. I would say, if one looks to what other people are doing, I would say that we have moved towards that treatment in the past 5 years. When I was a resident here, we did not treat (not audible)..."



**Quote continues...**

# Phronesis

**DOC:** "...And I think that...there is a drift more towards treating it. Not because there's dramatic new evidence, but because there are more case studies, and because there's a tremendous pressure to be doing something. And it may well work."



# Conclusions

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- Both forms of techne are present and necessary
- A constant tension exists between them

# Conclusions

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- Genres such as the case presentation, when they occur in settings of situated learning, can facilitate “savvy” learning and ethical role modeling



# Conclusions

- Genres, such as the case presentation, convey a professional habitus that helps fields maintain:
  - Their characteristic ways of perception
  - Their identity
- But...these perceptions could interfere with between-field and patient communication

# Conclusions

- The original debate around the term **techne** - certainty vs. uncertainty - makes **medicine** much more of an **artful science** rather than either an art or science