Collective Competence
Rethinking the discourse of competence in the context of teamwork

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The Rise of Teams

A core element of safe, quality care
The Rise of Teams

A key vehicle for novice socialization
An emerging quandary: How do we assess ‘team competence’?
Competent

We think of competence
Competent as an individualist phenomenon
Competent

individuals acquire knowledge and skill
Competent

which is performed and assessed
Competent

to document ‘competence’
Competent?
US Olympic men's 2004 basketball “dream team” had autonomous stars who were individually considered to be the best in the world, yet they performed poorly as a team.

(Pronovost, Archives of Surgery 2008)
One morning in the OR...
During a liver resection, the surgeon requests more sponges due to heavy bleeding. She asks the anaesthetist what the CVP is.

“15”, he replies.

She raises her head: “What? 15? No wonder we've got all this bleeding.” Shakes her head, saying to the resident, “It should be kept less than 5 when we’re transecting the liver. We're going to have to try and hurry this up.”
Surgeon asks anaesthetist: “Can you lower the CVP?”

Anaesthetist: “Yes, but he won't tolerate a CVP less than 5. He needs a high preload to maintain output.”

Surgeon: “If you don’t lower it, he’s going to lose a lot of blood and that won’t be pretty either!”
A matter of:

Individual competence?

Team competence?
Outline

2 ‘ways of seeing’
competence

Individualist discourse
Collective discourse

Teamwork Scenario
considered from both perspectives

Discussion
of the benefits and challenges of each
Every way of seeing . . .
is a way of not seeing

(Burke)
How we frame the issue of competence influences our attitudes and actions. Our discourse “selects and deflects our attention”.

(Burke)
Competence is a ‘god term’, an “expression to which other expressions are ranked as subordinate.”

(Burke)
As a god term, ‘competence’ is a rhetorical trump card, regularly played as the last word in educational debates.

(To a rhetorician, any bit of language with that kind of power cries out for a closer look...)
Individua list discourse

...a pervasive way of seeing
Individualist Approach

Educational Culture

Candidate Selection

Student Grades

Resident Licensing and Evaluation

Monitoring of Licensed Practitioners

Remediation
Competence
A brief history (medical education)

As-knowledge
As-performance
As-reliable test score
As-reflection

(Hodges 2006)
Competence
A brief history

Each discourse emphasizes a different aspect of competence; fosters a hidden incompetence’

(Hodges 2006)
Competence
Individualist Approach

Each discourse focuses on the individual
- Individual knowledge
- Individual performance
- Individual test score
- Individual (self) reflection
Key premises of individualist discourse

Competence is

• a quality that individuals acquire and possess
• a state to be achieved
• context-free, untied to time and space
Individual Cognition

Our dominant learning theories (adult learning, reflective learning, experiential learning) take the learner as ‘active agent’ at the centre of the activity of learning

(Bleakley 2006)
“we think of medical education as a process that moves novices from a state of incompetence, to one of competence”

(Hodges 2006)
Individual Cognition

Shapes our mandates and frameworks
E.g., the CanMEDS roles, with competencies characterized as behaviors that individuals can enact

(Frank 2005)
Collectivist discourse

...an emergent way of seeing
Key premises of collectivist discourse

Competence is

• a constantly evolving set of multiple, interconnected behaviors

• achieved through participation and enacted in time and space
Distributed Cognition

Conceptualizes collaborative work as ‘joint cognitive accomplishment not attributable to any individual’

(Hutchins 1991)
Activity Theory

Conceptualizes the actions of individuals as shaped by the social, technological and physical structures involved in their work – the ‘activity system.’


Activity systems are inherently unstable; a change anywhere in the system produces a ripple effect. Thus, competence is highly context-dependent.

(Activity Theory Sveiby 1997)
Social Learning Theory

The competence of a community emerges through social interaction, shared experience, development of tacit knowledge, and innovation in response to situated needs

(Lave 1991; Eraut 2000; Mittendorf 2006)
Two ‘ways of seeing’ competence

- Individual possession
  - Stable
  - Context-free
- Distributed capacity
  - Evolving
  - Based in situations

NOT a simple binary opposition. Collectivist not a ‘solution’ to individualist. Each ‘selects’ and ‘deflects’.
Two ways of seeing

One morning in the OR...
During a liver resection, the surgeon requests more sponges due to heavy bleeding. She asks the anaesthetist what the CVP is.

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She raises her head: “What? 15? No wonder we've got all this bleeding.” Shakes her head, saying to the resident, “It should be kept less than 5 when we’re transecting the liver. We're going to have to try and hurry this up.”
Surgeon asks anaesthetist: “Can you lower the CVP?”

Anaesthetist: “Yes, but he won't tolerate a CVP less than 5. He needs a high preload to maintain output.”

Surgeon: “If you don’t lower it, he’s going to lose a lot of blood and that won’t be pretty either!”
What does the anaesthetist know? (Familiar with liver resection? Level of expertise?)

What does the surgeon know? (Familiar with patient’s heart condition? Understand timing associated with lowering CVP? Familiar with anaesthetist’s approach?)

Surgeon’s communication skills? (Pro-active? Collaborative?)
Individualist discourse

Advantages

Can reveal individual areas that need improvement

Can foster sense of individual responsibility

Disadvantages

Can view individual strengths as the ONLY source of strength
A way of seeing...

“If every person in the room was at the top of their game, then this team would work just fine.”

“You do your job, I’ll do mine, and we’ll have a smooth morning.”
Collectivist discourse of competence

What is the access to information across the group? (Are team members aware of what others know/don’t know?)

What are the similarities and differences in team members’ perceptions of the situation? (Patient’s status? Relative advantage of lowered cvp? Nature of an ‘emergency’?)
A way of seeing...

“The question should not be whether a particular pilot is performing well, but whether or not the system that is composed of the pilot, co-pilot and the technology of the cockpit is performing well. It is the performance of that system, not the skills of any individual pilot, that determines whether you live or die.”

(Hutchins and Klausen 1998)
Discussion

Not a binary opposition

One discourse doesn’t replace the other

You can explore individualist aspects of the ‘dysfunctional team’ phenomenon

But a collective approach reveals different issues, emphasizes different dimensions

Can the 2 discourses co-exist in health professions education?
Implications for Assessment

Individualized assessment

- Reflects traditional values, e.g., autonomy (Amalberti 2005)
- Supports key agendas, e.g., licensure
- Facilitated by a vast assessment infrastructure (Hodges 2006)
Collectivist assessment

- reflects new values such as systems approach (Engestrom 1998)
- supports emerging agendas, e.g., IPP
- requires new tools for measuring performance
Measurement Advances

• Shared mental models
  - Closed-loop communication
  - Mutual performance monitoring
  - Adaptive/supportive behavior

• Situational assessment
  - Problem identification/conceptualization
  - Plan execution

(McIntyre et al. 2005; Salas et al. 2007)
We need research
- that operationalizes what ‘collective competence’ is
- that explores how ‘collective competence’ is learned

Design challenges
- the ‘distributed’ aspect of competence is invisible
- current research focuses on co-located teams
In summary

Our traditional discourse of competence is individualist.

This discourse is a way of seeing, emphasizing some aspects of competence, and deflecting others.

It has historically ‘fit’ our education & assessment needs: to what degree is it sufficient now?
In summary

Educational ‘god terms’ shape our thinking about what matters, what is possible

The danger with god terms is that, through repeated use and familiarity, they become suggestive of a natural, universal and inevitable order of reality
In summary

Recognizing that our idea of competence is constructed, that it selects and deflects –

Helps to guard against naïve acceptance

Creates space for an evolving discourse reflective of emerging mandates
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