

Critical thinking: Contesting perspectives from university academics



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Outline



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2. Traditions of critical thinking
3. Academics' conceptions of critical thinking
4. Theoretical framework
5. Methodology
6. Findings
7. Implications

Rationales for critical thinking



- A defining characteristic of higher education (Barnett, 2000; Halpern, 1999)
- Knowledge economy & knowledge workers
- Knowledge as relative
- Democracy & responsible citizens
- Accountability

Traditions of critical thinking



3 traditions (Sternberg, 1986):

a) Philosophy

- Ideal situations

b) Psychology

- Real-life constraints, cognitive processes

c) Education

- Both? Advantages? Disadvantages?
- Generic vs domain specific

Academics' conceptions of critical thinking



- **Critical thinking needs to be developed (Kuhn, 2009)**
- **Educators play an important role (Haas & Keeley, 1998; Paul, 2005)**
- **Implications for pedagogy and assessment (McMurray, Thompson, & Beisenherz, 1989)**
- **A distinct field of study**

Conceptions of critical thinking: Some issues



- **Lack of clarity in definitions and pedagogical understandings (Paul, Elder, & Bartell, 1997)**
- **Diverse definitions of critical thinking (Jones, 2004; Vaske, 1998)**
- **Disciplinary differences in definitions (Jones, 2007; Moore, 2011)**

Theoretical framework



- Theory of action (Argyris & Schön, 1974)
Espoused theories vs theories-in-action
- Teaching and learning as situated practice (Lave & Wenger, 1991)

Methodology



- **Semi-structured interviews**
 - 1) **What does critical thinking mean to you?**
 - 2) **In your discipline, what does thinking critically mean?**
 - 3) **Do you encourage critical thinking in your teaching?**
 - a) **If yes – How do you do it? In what context?**
 - b) **If no – Why not?**

Methodology



- **Participants: 8 academics from 7 disciplinary areas**

Participant	Discipline	Year of experience
1	Physics	9 years
2	Academic English	5 years
3	Real Estate	10 years
4	Language Education	15 years
5	Electrical and Electronic Engineering	6 years
6	Social Work	9 years
7	Nursing	3 years
8	Nursing	1 ½ years

Conceptual and pedagogical understandings



Participant	Conceptual understandings	Pedagogical understandings
1 (Physics)	Logical thinking	Modelling problem solving
2 (Academic English)	Making personal judgements	CTD as secondary to proficiency development
3 (Real Estate)	Reason seeking	Encouraging interaction
4 (Language Education)	Examining the totality of a situation	Problem-based learning
5 (EEE)	Solving new problems	The use of technology
6 (Social Work)	Being an independent, open-minded professional	Idea sharing through group work
7 (Nursing)	Making professional judgements	Giving guidance as an information provider
8 (Nursing)	Being open-minded in health assessment	Facilitating learning

Findings



- **Components in participants' definitions of critical thinking: outcomes/goals, ability, affect, knowledge**
- **Critical thinking as disciplinary thinking**
- **Pedagogical understandings were vague**

Critical thinking as disciplinary thinking: outcomes/goals



Participant	Outcomes/Goals	Descriptions
1 (Physics)	Problem solving	Solving physical problems
2 (Academic English)	Stance taking	Forming personal judgements
3 (Real Estate)	Problem solving	Solving housing issues based on reasons
4 (Language Education)	The skilled thinker	Mastery of the ability to step out
5 (EEE)	Problem solving	Solving new problems
6 (Social Work)	Decision making	Making decisions independently
7 (Nursing)	Stance taking; problem solving	Establishing one's POV Solving a medical issue
8 (Nursing)	Decision making	Making appropriate choice of treatment

The ability component

Critical thinking ability	Frequency
Analysis	3
Application	4
Association	1
Categorisation	1
Comparison	4
Comprehension	1
Generalisation	1
Identification	1
Information collection	1
Judgement	8
Justification	4
Persuasion	1
Prediction	2
Technicality	1

Critical thinking as disciplinary thinking: Abilities and knowledge



Participant	Making judgements about...
1 (Physics)	Physical laws and theories
2 (Academic English)	Reliability of sources
3 (Real Estate)	Housing issues and decisions
4 (Language Education)	Arguments, contexts
5 (EEE)	Possible alternatives
6 (Social Work)	Professional issues
7 (Nursing)	Medical conditions, effectiveness of an action
8 (Nursing)	Suitability of assessment tools, health conditions

The affective component



Disposition	Frequency	Disciplines
Courage	1	Social Work
Creativity	1	Language Education
Independence	1	Social Work
Integrity	4	Language Education, Social Work, Nursing (2)
Openness	5	Real Estate, Language Education, Social Work, Nursing (2)
Rationality	3	Physics, Real Estate, Language Education
Scepticism	4	Academic English, Language Education, Social Work, Nursing
Self reflection	2	Language Education, Social Work

Pedagogical understandings



- **Common strategies: interaction through questioning and discussions**
- **Lack of coherence between conceptual and pedagogical understandings**

Where do we go from here?



- **Macro view of conceptual understandings**
- **Disciplinary approach for researching critical thinking**
- **Insights complemented by observation of theories-in-use (Kane, Sandretto, & Heath, 2002)**

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