

Adjusting the lens

Jenni Case

Centre for Research in Engineering Education
Department of Chemical Engineering
University of Cape Town (UCT)
jenni.case@uct.ac.za

knowledge,
capability and
self-authorship in
graduate narratives



Photo: Silindile Mhlongo

What this talk is about

- student learning in HE, outcomes of HE
- researching student learning, gradueness
- researching the social world
- **using theory**
- using methodology
- trying to make some sense
- trying to build knowledge

Who's here?

Go to www.govote.at and use the code **95 07 24**

The problem with 'common sense'

Example: **motivation** as a causal influence on learning outcomes... how does it work?

1. Common sense ideas on motivation & learning
2. Create a questionnaire and find a correlation between those who tick statements which describe them as motivated and those who get good results
3. Voila! A student learning theory

The most important things you need

1. To tell that what you are talking about are real entities
2. To have a model of causality that is not direct and linear
3. To have a model of how the past influences the present
4. To have a complex model of human agency
5. To be able to account for a very fast changing contemporary context
6. To have a theory of knowledge

Therefore... (speaking esp to PhD students)

- This is the only reason you need theory
- You are most probably going to go to social theory of some sort
- You might need a passing acquaintance with philosophy
- You need to get reading
- But remember that what you are actually needing this for is because you are doing research

MAJOR caveat

If all you have is a hammer, everything looks like a nail

Abraham Maslow, 1996

The case study

Early 2000s

3rd year chemical engineering class at UCT

Participant observation during one core course

Two interviews with 36 students (out of class of 45)

10 years on

Follow up telephonic interviews with 30 of the 36 originally interviewed

male	female
------	--------

60%	40%
-----	-----

African	coloured	Indian	white	Internat
---------	----------	--------	-------	----------

49%	3%	3%	31%	14%
-----	----	----	-----	-----

Confessions of a miner – 2002 dataset

- Case, J. M. (2007). Alienation and engagement: Exploring students' experiences of studying engineering. *Teaching in Higher Education, 12(1), 119-133.*
- Case, J. M., & Marshall, D. (2008). The 'no problem' Discourse model: Exploring an alternative way of researching student learning. *International Journal of Educational Research, 47(3), 200-207.*
- Case, J. M., Marshall, D., & Linder, C. (2010). Being a student again: A narrative study of a teacher's experience. *Teaching in Higher Education, 15(4), 423-433.*
- Marshall, D., & Case, J. M. (2010). Rethinking 'disadvantage' in higher education: A paradigmatic case study using narrative analysis. *Studies in Higher Education, 35(5), 491-504.*

With 2011-13 follow up interviews

- Case, J. M. (2013). *Researching student learning in higher education: A social realist approach*. London: Routledge.
- Case, J. M. (in press). A social realist perspective on student learning in higher education: The morphogenesis of agency. *Higher Education Research & Development*.
- Case, J. M. (in press). Focusing on emergent interactions: A critical realist reconceptualization of the relationship between teaching and learning *Teaching in Higher Education*.
- Case, J. M. (submitted). Journeys to meaning-making: A longitudinal study of self-authorship amongst young South African engineering graduates. *Journal of College Student Development*.
- Case, J. M., & Marshall, D. (submitted). Bringing together knowledge and capabilities: A case study of engineering graduates. *Higher Education*.

Knowledge

- ‘Reclaiming knowledge...’ (Muller)
‘Bringing knowledge back in...’ (Young)
- When did we lose knowledge?
A short history...

Young, M. (2008). *Bringing knowledge back in: From social constructivism to social realism in the sociology of education*. London: RoutledgeFalmer.

Maton, K. (2013). *Knowledge & knowers: Routledge*.

Moore, R. (2012). Social realism and the problem of the problem of knowledge in the sociology of education. *British Journal of Sociology of Education*, 1-21. doi: 10.1080/01425692.2012.714251

Muller, J. (2000). *Reclaiming knowledge: Social theory, curriculum, and education policy*. London: RoutledgeFalmer.

analysis

- Knowledge acquisition manifested as:
 - Confidence
 - Engineering approach to problem-solving
 - Working independently & responsibly
 - Ability to learn new knowledge
- (Limited reference to actual content of engineering degree)

Capabilities

- “what people value being and doing, and to work to increase their freedom to be in those ways or to do those things in terms of living lives they regard as good”

Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*: Belknap Press.

Sen, A. K. (1999). *Development as freedom*. Oxford: Oxford University Press.

Walker, M., & McLean, M. (2013). *Professional Education, Capabilities and the Public Good: The Role of Universities in Promoting Human Development*. London: Routledge.

analysis

- Capabilities manifested as
 - Being an engineer
 - Locating career in bigger life decisions
 - Locating engineering within the broader societal/environmental context
- cf. to Walker & McLean 2013
 - Knowledge & skills
 - Assurance and confidence
 - Resilience
 - (Limited informed vision & affiliation)

Self-authorship

- ‘shift in meaning-making capacity from outside the self to inside the self’
- domains
 - Cognitive
 - Intrapersonal
 - Interpersonal

Barber, J. P., King, P. M., & Magolda, M. B. B. (2013). Long Strides on the Journey Toward Self-Authorship: Substantial Developmental Shifts in College Students' Meaning Making. *The Journal of Higher Education*, 84(6), 866.

Baxter Magolda, M. B. (2001). *Making their own way: Narratives for transforming higher education to promote self-development*. Sterling, VA: Stylus.

analysis

- Self-authorship basically identifiable in all (30) graduate interviews
 - Distinct ways in which the degree formed them and which defines their current identity
- More elaborate manifestations of self-authorship in 9 interviews
 - Non-traditional career routes (4 graduates)
 - Traditional engineering corporate jobs yet expressing a voice (5 graduates)

Lens comparisons (my view)

- Knowledge acquisition in itself a limited conceptualisation of gradueness
- Capabilities too broad and insufficiently linked to distinct HE experience
- Self-authorship lacking an explanation of the interplay between structure & culture
- BUT bring these into a broader social realist conceptualisation of the formation of agency... more on Thursday!

Discussion

