Team Education Strategies as Inclusive Exercises for BioGEES* Students

Brian Whalley
University of Sheffield

b.whalley@sheffield.ac.uk
@brianwhalley

(*Enhancement of Fieldwork Learning project, CATE 2018)

Teamwork

Group work – Team work

Getting away from the 'Victorian Educational System'

Pile 'em in deep, lecture 'em long and examine 'em hard (and, machismo/machisma, provide the most arduous course/fieldwork?)

Developing knowledge is an essential part of professional education. However, professionals need to have more than the knowledge of their domain, they need to be able to apply their knowledge in practice … Few if any professionals practice in isolation.

Rachel Helen Ellaway: **Activity Designs for Professional Learning**, in Beetham and Sharpe, *Rethinking Pedagogy for a Digital Age*. 2013

'Research Frontiers': bringing research into teaching via project-based and teamwork approaches Whalley and Favis-Mortlock, Planet, Special edition 5, 2003

Cognitive Apprenticeship & Situated Learning

Collins, Seely Brown, & Holum

Situated learning is the notion of learning knowledge and skills in contexts that reflect the way the knowledge will be useful in real life

Students learn conditions for applying knowledge

Situations foster invention

Students see the implications of their knowledge

Context structures knowledge appropriate to its use

Teamwork – with authentic tasks

Problem based - appropriate to level and expertise:

Industry/Consultancy: a task or design brief
Academic: grant application, project personnel
Legal/Forensic: brief

For: Government, Local gov, NGO, pressure group

Definable endpoint: Time, date (submission)

Delivery mode: report, presentation, video, web page

Payment?: money/marks/ competence

Working in teams
builds inclusivity

Some issues
Working in groups or teams, differentiating the two
Making it (really) active learning
It may be open-ended

How many people per team?
How to cope with ‘freeloaders’?
Selecting members (self or ‘forced’)
Project size, proportion of unit (time and marks)
Assessment - several issues here
Individual versus team

Police Investigations as teamwork

Scene of Crime Officer
Forensics Team
reporting back to the Crime Team

Not all the team need (or should) be at the crime scene!
(Lisa Hammond as IO Helen Milton in ‘Vera’)

Members contribute individually to the team
Develop their own ideas and skills but shared as a component of the team
Make it a measure of their worth as individuals and team members by completing team tasks

Things to consider

Reducing stress levels for individuals
Authentic tasks (actual to slightly contrived)
Authentic assessment (how well does it fulfil the brief?)
Incorporating skills and capabilities they (should) have
Skills development as needed (knowing where to stop)
Employability
(from writing memos to minutes, time keeping and responsibility, dealing with pressure, ethics, professional conduct)
Pedagogic rectitude, (avoiding the VLE)
Exploring individual needs
Building a sense of achievement for indivduals

Providing collaborative tools
Incorporating new tools,
eg digital note taking, minutes recording and transcription

Providing appropriate design brief, scaffolding and feedback

Incorporating skills and capabilities

JISCs digital capabilities
Information literacies
as well as subject-related skills

What's in a team?

Cognitive
(Think, problem solve, create)

Affective
(Value, appreciate care)

Conative
(Act, decide, commit)

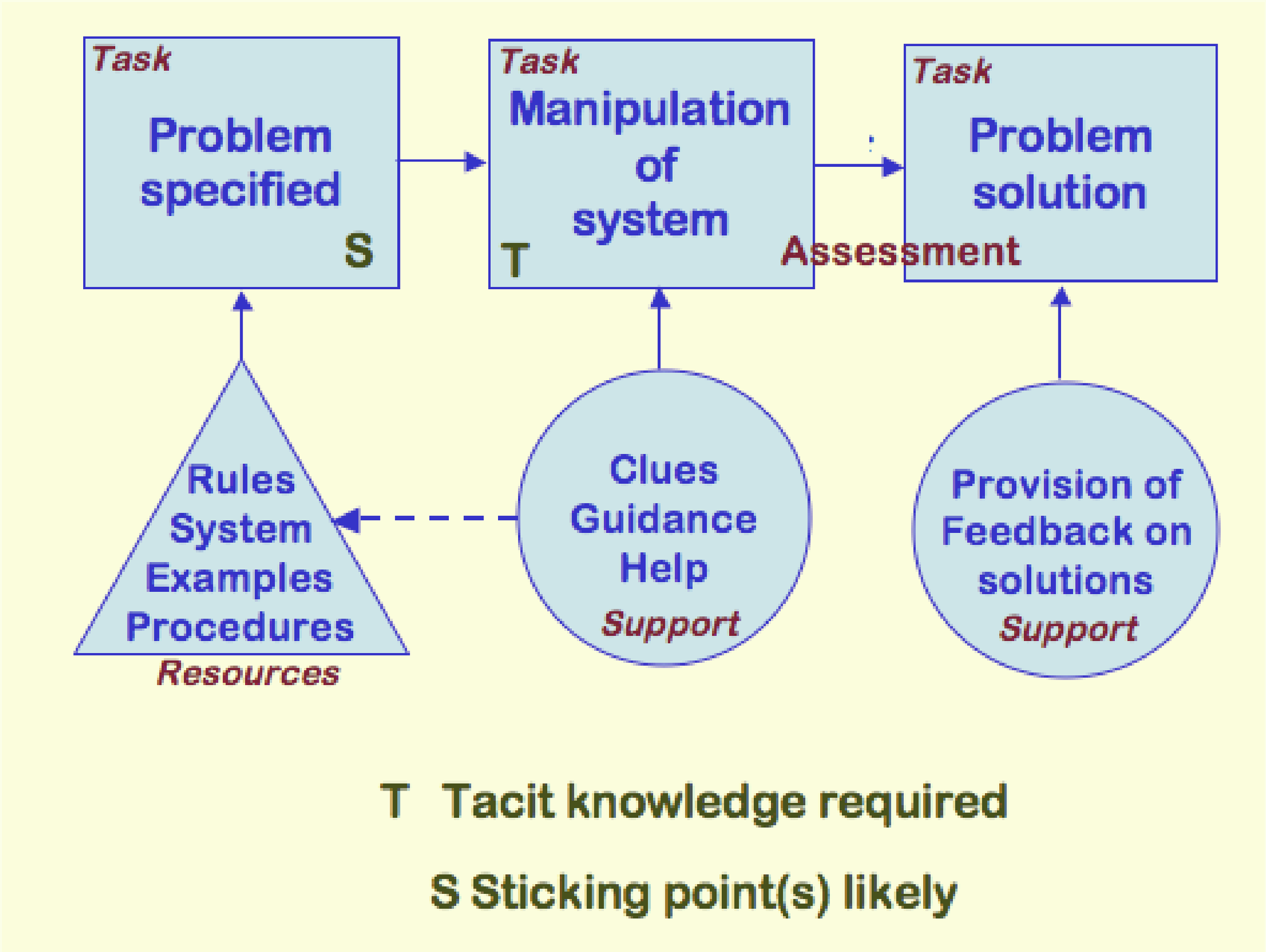
Psychomotor
(Move, perceive and apply physical skills)

Abilities, inclusion, diversity-enabled

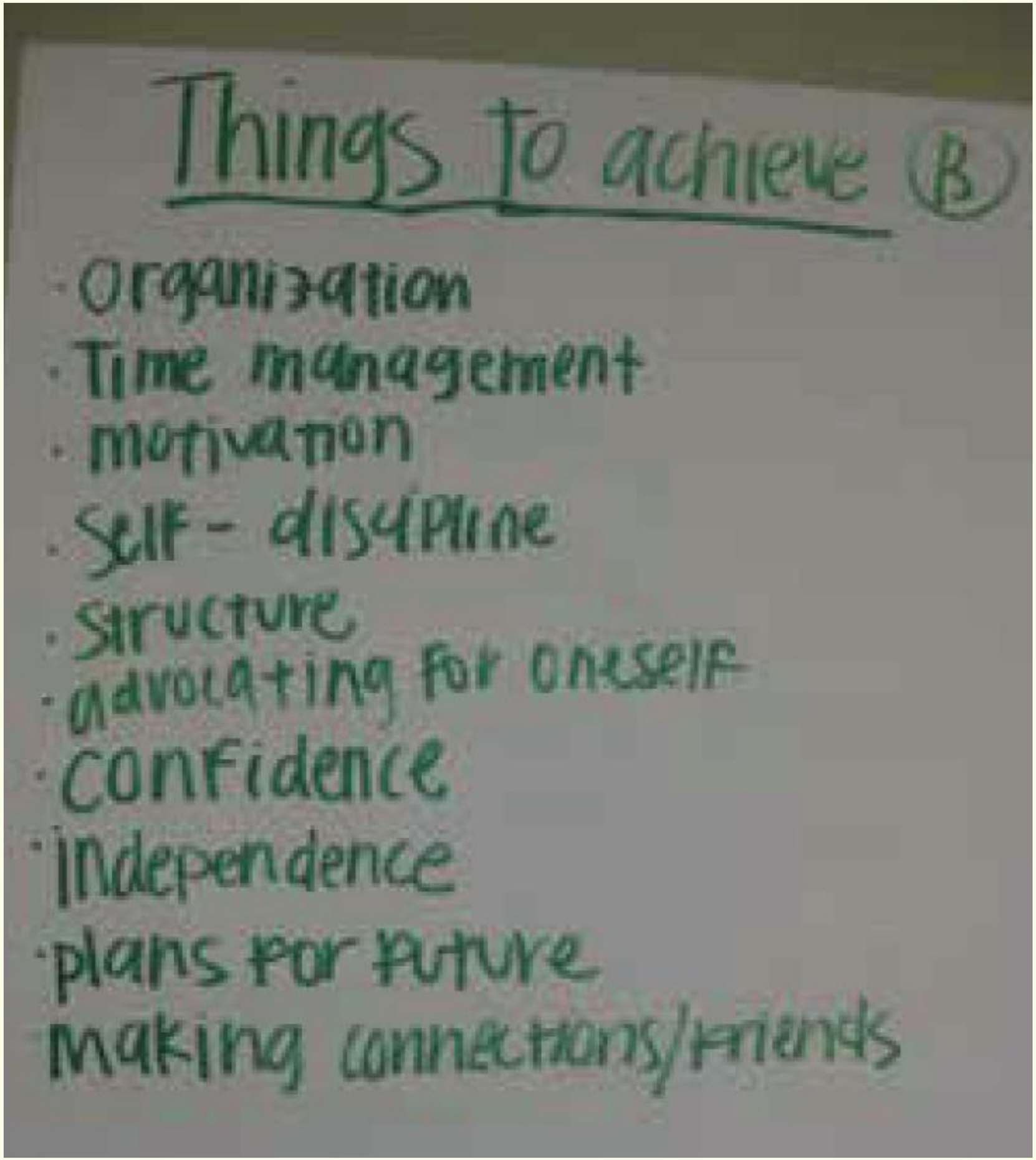
Build the teams around individuals and their abilities/disabilities to deal with tasks and problems

You have only to look at the current administrations of the UK and USA to see how well this can be done……..

Oh, I really meant, specify the problem clearly



Whalley and Taylor, 2008, Using criterion-referenced assessment and 'preflights' to enhance education in practical assignments, Planet 20, modified after Oliver et al. 2007



Teamwork: things to achieve

Group work for people with Learning Difficulties

Enhancing educational opportunities for students with Specific Learning Difficulties

Lidmill Liga (2013)

Participating in Fieldwork
we don’t all have to be in the field!

Vicarious fieldwork

Technology:

Body cam (head cam)
Virtual FT
Drone
camera/iphone
Gigapan
360 camera
Remote sensing platforms
Google earth
Immersive AR (3-d boreholes)
Laser scanning caverns, mines, archaeology

5.3.3 Group Assessment

Another major anxiety with group work is the question of assessment. Students fall out over marks as families fall out over money, and we tend to forget that this is the hard currency of their degree, and so it is not surprising that feelings run high. Where there may be an undisclosed mental health problem this could be a point of stress, or it may be that coping strategies for one individual (such as a need to gather all the data and work through it independently) are hard for other students to understand.

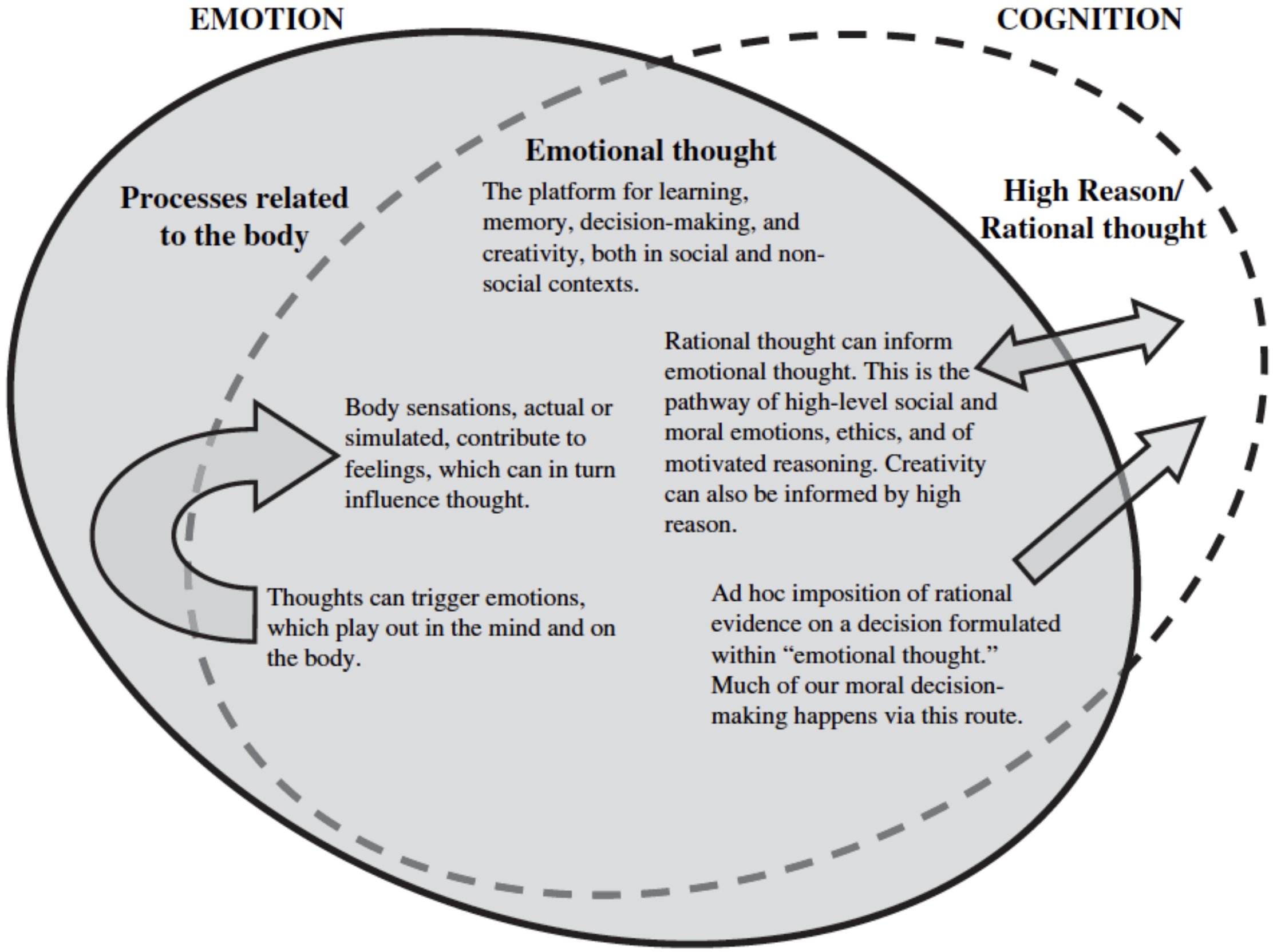
Leach and Birnie (no date*)

We operate policy of self selecting groups as they usually know each other quite well

*From publications, ca 2006

Geography Discipline Network's Inclusive Curriculum Project

https://www2.glos.ac.uk/index.htm


EMOTION
COGNITION
Emotional thought
The platform for learning, memory, decision-making, and creativity, both in social and non-social contexts.
Processes related to the body
High Reason/ Rational thought
Body sensations, actual or simulated, contribute to feelings, which can in turn influence thought.
Rational thought can inform emotional thought. This is the pathway of high-level social and moral emotions, ethics, and of motivated reasoning. Creativity can also be informed by high reason.
Thoughts can trigger emotions, which play out in the mind and on the body.
Ad hoc imposition of rational evidence on a decision formulated within "emotional thought." Much of our moral decision-making happens via this route.

Assessment Issues

Do we need to assess in order to provide 'feedback'(feedforward)?
Assessment for learning
Assessment of learning

Do we actually need to give marks? *
Do we need to use the marks?
providing feedforward gives the benefits
Capabilities, assess in the process, as in field notebooks or lab notebooks

competence-based assessment

Some references

Collins, A., Seely Brown, J. & Hollum, A. Cognitive apprenticeship: Making thinking visible, American Educator, 15,3, 6-111

Ellaway, R.H. Activity Designs for Professional Learning, in Beetham and Sharpe, *Rethinking Pedagogy for a Digital Age*. 2013

Whalley, W.B. & Favis-Mortlock, D. 'Research Frontiers': bringing research into teaching via project-based and teamwork approaches, Planet, Special edition 5, 2003

Whalley, W.B. and Taylor,L. Using criterion-referenced assessment and 'preflights' to enhance education in practical assignments, 2008, Planet 20,

Leach, J. and Birnie, J (no date*) Delivering Geography, Earth and Environmental Sciences at HE: including students with mental health difficulties