Edinburgh Summer School in
Clinical Education (ESSCE) 2016

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Learning needs & professional development
Academic feedback

Michael Ross & Tim Fawns
Monday AM

centre for
medical
education

Overview

Learner

Learning activities

Content

Teacher

Learning & teaching situations

Teaching activities

* * * * *

Academic feedback

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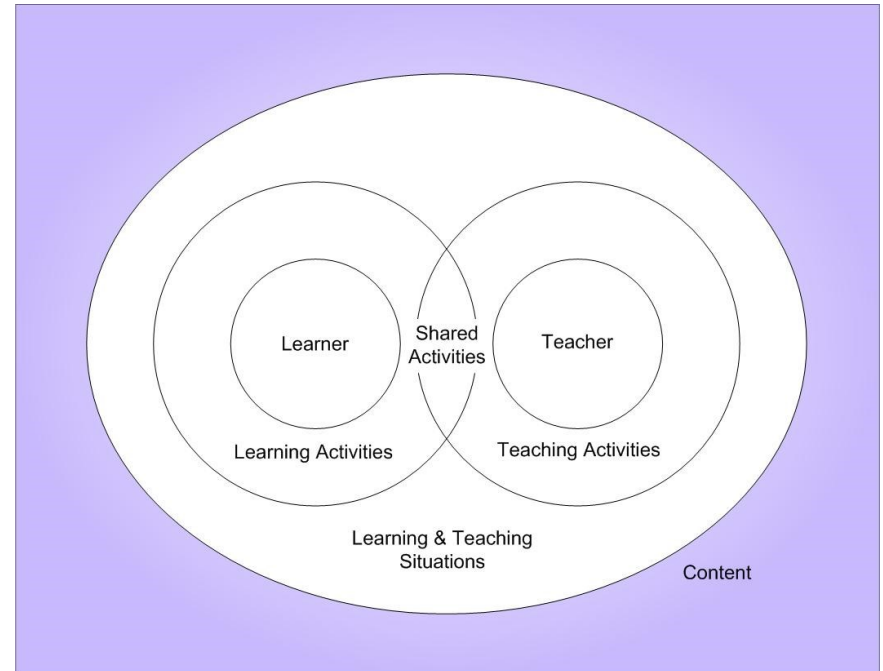
Think about one (or a group) of your learners. How much do you really know about them?

Learner – every one is different

Prior learning

Experience

Memory and association

Motivational factors

    Intrinsic (e.g. interest, will to succeed…)

    Extrinsic (e.g. assessment, approval…)

Commitments (e.g. family, part-time job)

Learning styles / preferences…

Learner style / preference / approach

Deep, Superficial, Strategic (**Marton & Säljö**)

Diverging, Assimilating, Converging, Accomodating… (**Kolb**)

Visual, Auditory, Kinesthetic +/- Read/write (**Barbe, Fleming**)

'Multiple Intelligences' - Linguistic, Mathematical, Musical, Kinaesthetic, Visiospatial, Inter- & Intra-personal (**Gardner**)

Myers-Briggs Inventory

Honey & Mumford Learning Styles Questionnaire

The appeal of learning styles

Simple solution to complex problems

Plausible explanation for failure of some students

Opportunity to explore nature of teaching and learning

Help focus attention on needs of learners

Emphasise individual rather than organisational responsibilities

Problems with learning styles

Theoretical incoherence and conceptual confusion

Variable quality of learning style models

No clear implications for pedagogy

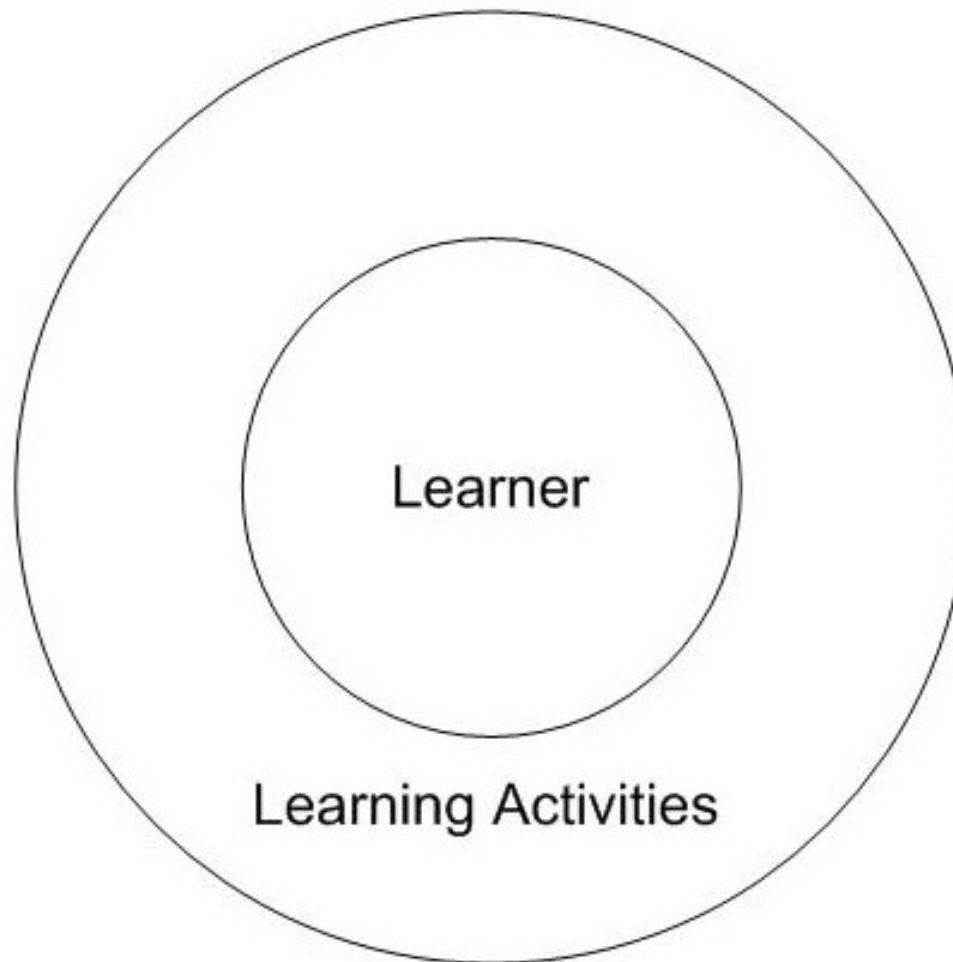Decontextualised and depoliticised view of learning and learners

Neglect of knowledge

Learning Styles reference

Coffield, F.; Moseley, D.; Hall, E. & Ecclestone, K. (2004) *Should we be using learning styles? What research has to say to practice.* London: Learning & Skills Research Centre.

www.LSRC.ac.uk

What sorts of things can (your) learners do to help them learn?

Learner – learning theories

Behavioural learning theories (**Pavlov**, **Skinner**)

Cognitive learning theories (**Piaget**, **Bruner**, **Gagne,**
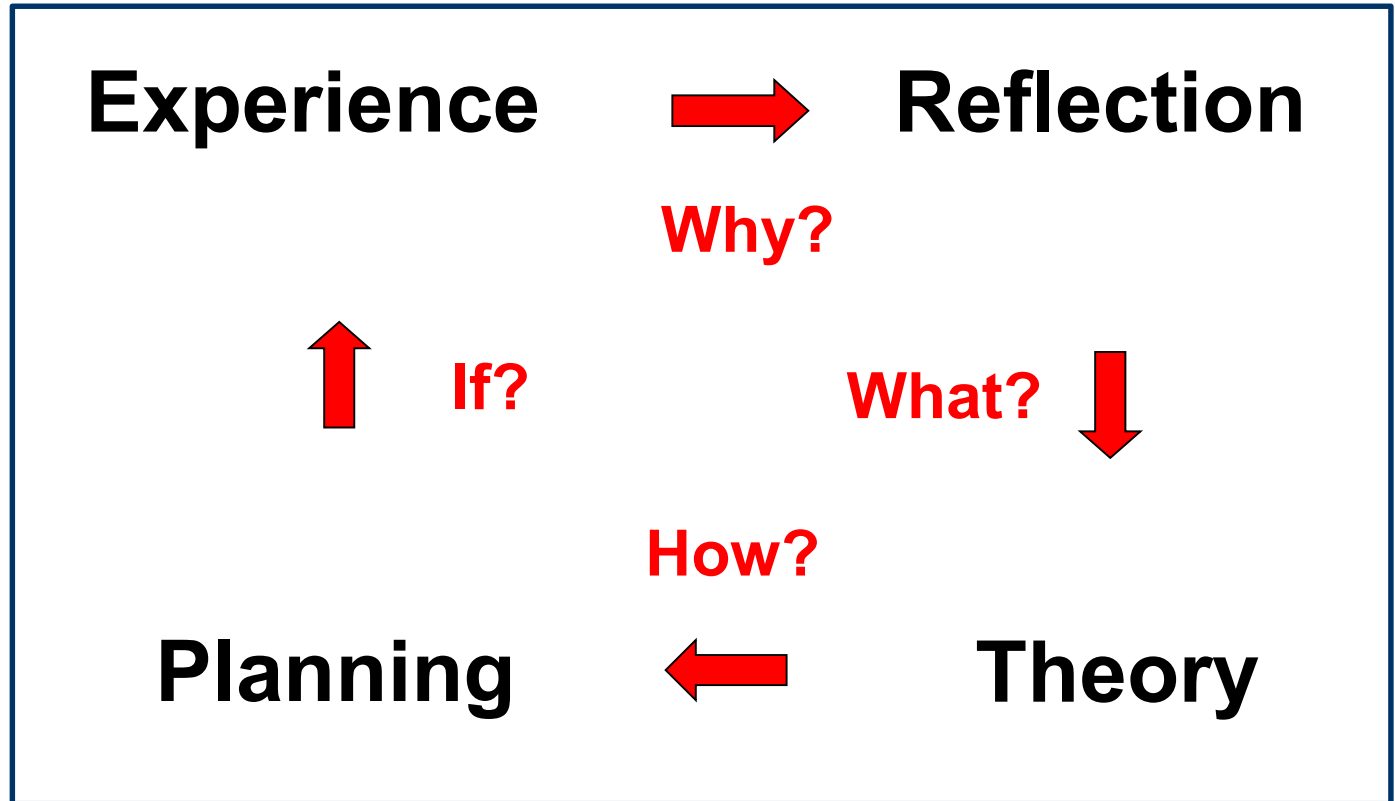
Ausubel, **Vygotsky**)

Adult learning theory (**Knowles** 'Andragogy')

Student-centred theories (**Entwistle**, **Marton**, **Biggs**)

Experiential learning theory (**Kolb**'s learning cycle)…

Kolb's Cycle – experiential learning

Effective learning involves all 4 (although may have preference)

Experience ➡ **Reflection**

Why?

If? **What?**

How?

Planning ⬅ **Theory**

Adapted from: Kolb DA (1984) Experiential learning. Experience as the source of learning and development. New Jersey: Prentice-Hall

Reflective Practice (Schön 1987)

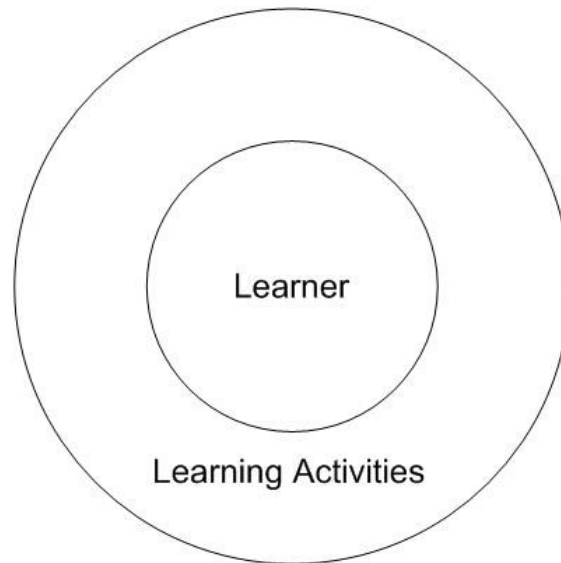Ability to:

- Practise as an autonomous professional
- Recollect, think, reason and deliberate
- Recognise & explore confusing situations
- Engage in self assessment / critique
- Change behaviours / thinking as a result
- Adapt to change

Learner

Learning Activities

Content

How do (your) learners know what they need to learn?

How do you know what you need to learn?

Content - terminology

Learning outcome (LO)

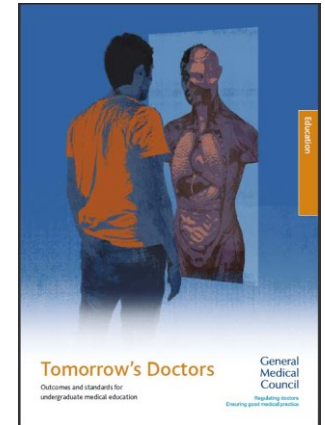Learning objective

Behavioural objective

Aim

Goal

EPA (Entrustable Professional Activity)

Intention

Competence

Competency

Capability

Performance

GMC Tomorrow's Doctors

Learning outcomes for medical graduates:

1) The doctor as a scholar and a scientist

2) The doctor as a practitioner

3) The doctor as a professional

GMC (2009) Tomorrow's doctors: recommendations on undergraduate medical education. London: General Medical Council. Online: http://www.gmc-uk.org/static/documents/content/TomorrowsDoctors_2009.pdf

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GMC Tomorrow's Doctors

1) ## The doctor as a scholar and a scientist

   8a) Explain the scientific bases for common disease presentations

2) ## The doctor as a practitioner

   13c) Perform a full physical examination

3) ## The doctor as a professional

   22c) Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem-solving approach

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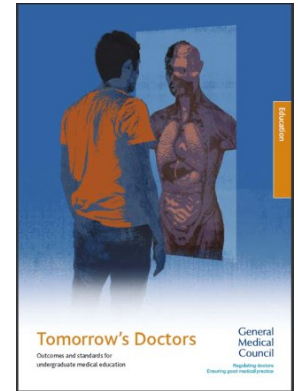
Content – 'Constructive alignment'
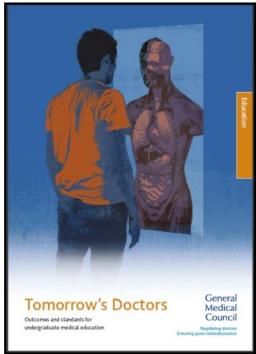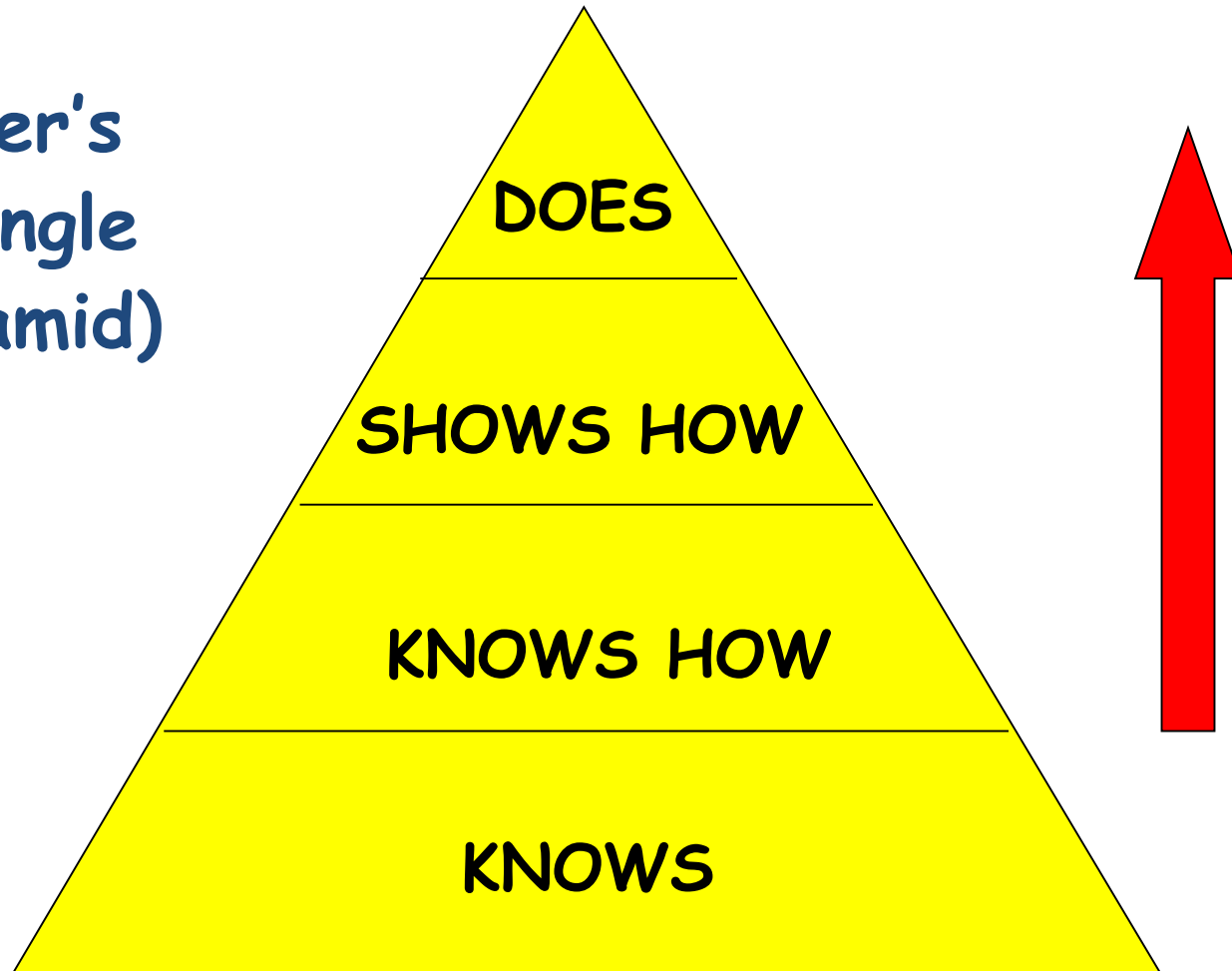

Define LO   **Student-centred Teaching & Learning**   **Appropriate assessment**
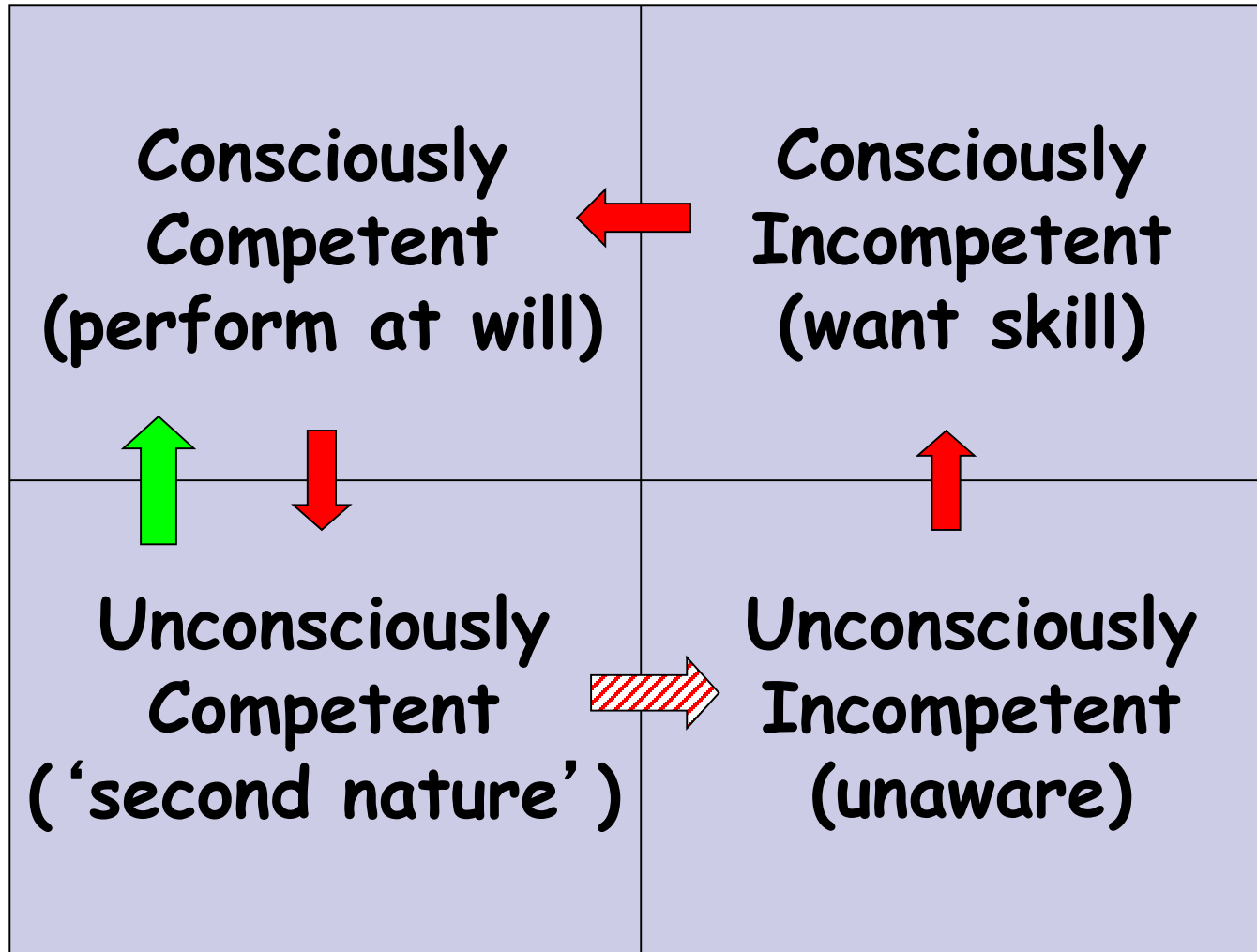
Evaluation

Biggs J (1996) Enhancing teaching through constructive alignment. HE 32:347-

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Miller's Triangle (pyramid)

DOES

SHOWS HOW

KNOWS HOW

KNOWS

Miller (1990) The assessment of clinical skills / performance. Acad Med (Suppl) 65:S63-70

Content – mastery of skills

Consciously Competent (perform at will) ←	**Consciously Incompetent (want skill)** ↑
↑ ↓ **Unconsciously Competent ('second nature')**	⇒ **Unconsciously Incompetent (unaware)**

Luft J, Ingham H (1955) The Johari window, a graphic model of interpersonal awareness. Proceedings of the western training laboratory in group development. Los Angeles, UCLA

Identifying Learning Needs

SELF

- Self Appraisal
- Reflecting on practice
- Observing others
- Reading
- Critical incident analysis

Appraisal and mentoring

- Reflective writing
- Practice diaries
- Logbooks
- Portfolio
- Assessments

FROM OTHERS

- Feedback – 360 degree appraisal
- Patient Feedback
- Audit
- Assessment
- Academic Feedback

Cognitive Load Theory

'Working memory' (<30 sec) has limited capacity

Excessive 'cognitive load' on this can impair learning
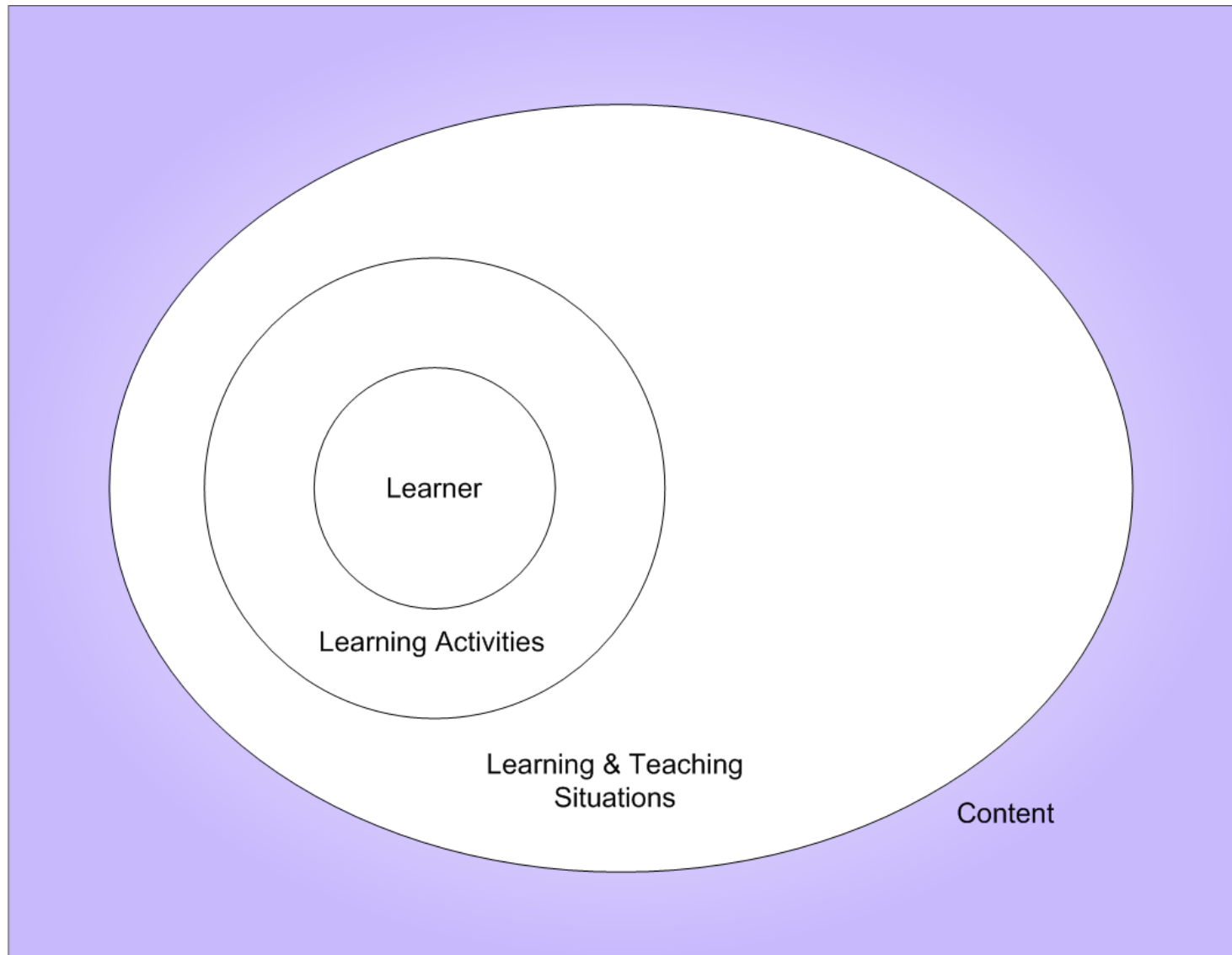
3 types of load

- Intrinsic (grasping the content / task to learn)
- Extraneous (non-essential aspects of situation)
- Germane or 'Generative' (learning processes)

Sequence, reduce 'elements', tailor to individual

Avoid distractions, align, clear tasks & examples

Learning & teaching strategies to maximise retention

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Learner

Learning Activities

Learning & Teaching
Situations

Content

Where do (your) learners learn?

Key concepts: L&T Situations

Any situation or context in which learning or teaching occur

Can described by name (e.g. lecture, pbl tutorial, ward round, outpatient clinic)
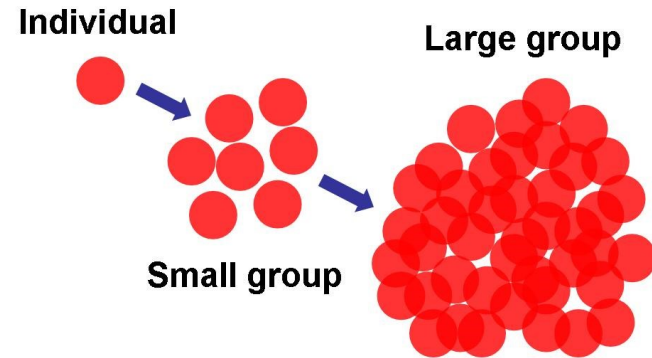
Can also be described by variables such as number of learners, presence of patients…
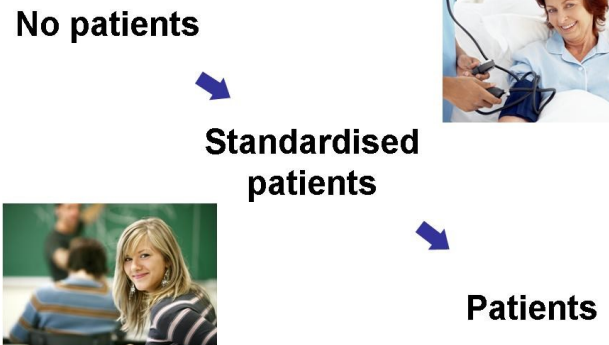
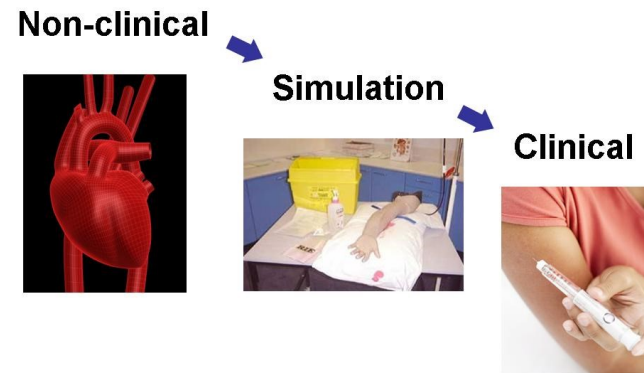Preferences relate to learning styles

1) Presence of learners & teachers

Learners only → **Learners & Teachers** → **Teachers only**

2) Number of learners

Individual → **Small group** → **Large group**

3) Presence of patients

No patients → **Standardised patients** → **Patients**

4) Authenticity

Non-clinical → **Simulation** → **Clinical**

Ross MT, Stenfors-Hayes T (2009) Developing a typology of learning & teaching situations in undergraduate medical education. Poster at ASME ASM, Edinburgh

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5) Centrality of teacher

Presenter

Tutor

Facilitator

(i.e. student passive – active)

6) Degree of learner responsibility

Observing

Independent practice

Limited / supervised practice

7) Degree of formality

Informal

Semi-formal

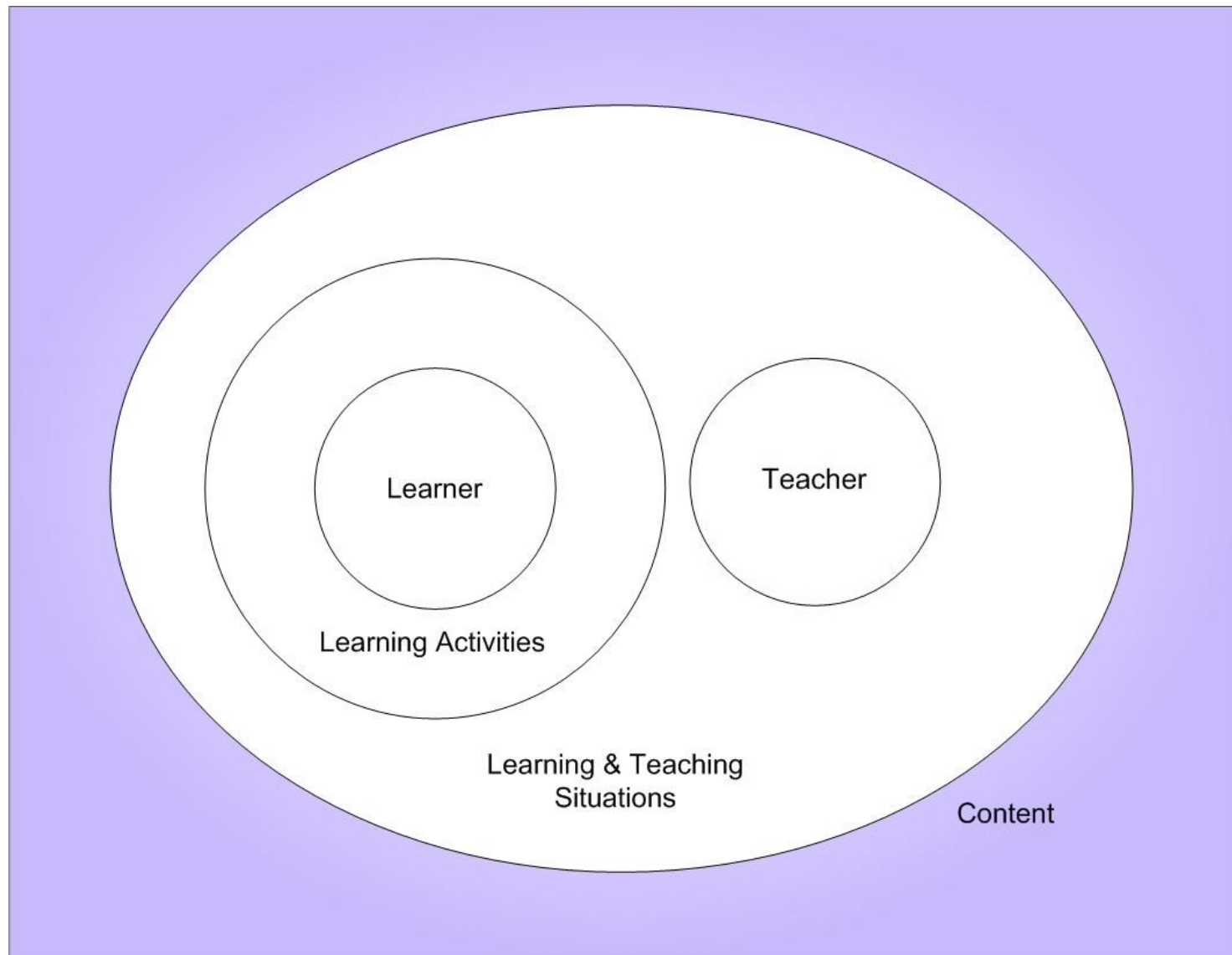**Formal**

8) Degree of physicality

Physical

Blended

Virtual

Ross MT, Stenfors-Hayes T (2009) Developing a typology of learning & teaching situations in undergraduate medical education. Poster at ASME ASM, Edinburgh

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Learner

Teacher

Learning Activities

Learning & Teaching Situations

Content

What does the term 'teaching' mean to you?

What does the term 'teaching' mean to you?

Ross MT (2012) UoE EdD Thesis Online: www. researchgate.net /profile /Michael_Ross3

PRODUCTION (poiesis)	PRACTICE (praxis)	SCIENCE (theoria)	COMMON SENSE	ART
SYSTEM	REFLECTIVE PRACTICE	COMPETENCE	DIRECTING ACTIVITY	IMPARTING INFORMATION
TRANSMISSION	APPRENTICESHIP	FACILITATING UNDERSTANDING	SUPPORTING GROWTH	SUPPORTING TRANSFORMATION
SOCIAL REFORM	MANAGED PROCESS	SCHOLARSHIP	PARENT – CHILD INTERACTION	ADULT – ADULT INTERACTION
LEARNING ACTIVITY	ASSESSMENT	PROVIDING RESOURCES	TARGETING LEARNING NEEDS	GENERATING ENTHUSIASM

Have you tried the TPI?

'Teaching Perspectives Inventory'

Pratt & Collins (1998)

www.teachingperspectives.com/tpi/

Insights? Surprises? Problems?

Strengths & weaknesses of the TPI?

Aligned beliefs / intentions / actions?

Example of completed 'Teaching Perspectives Inventory' feedback from
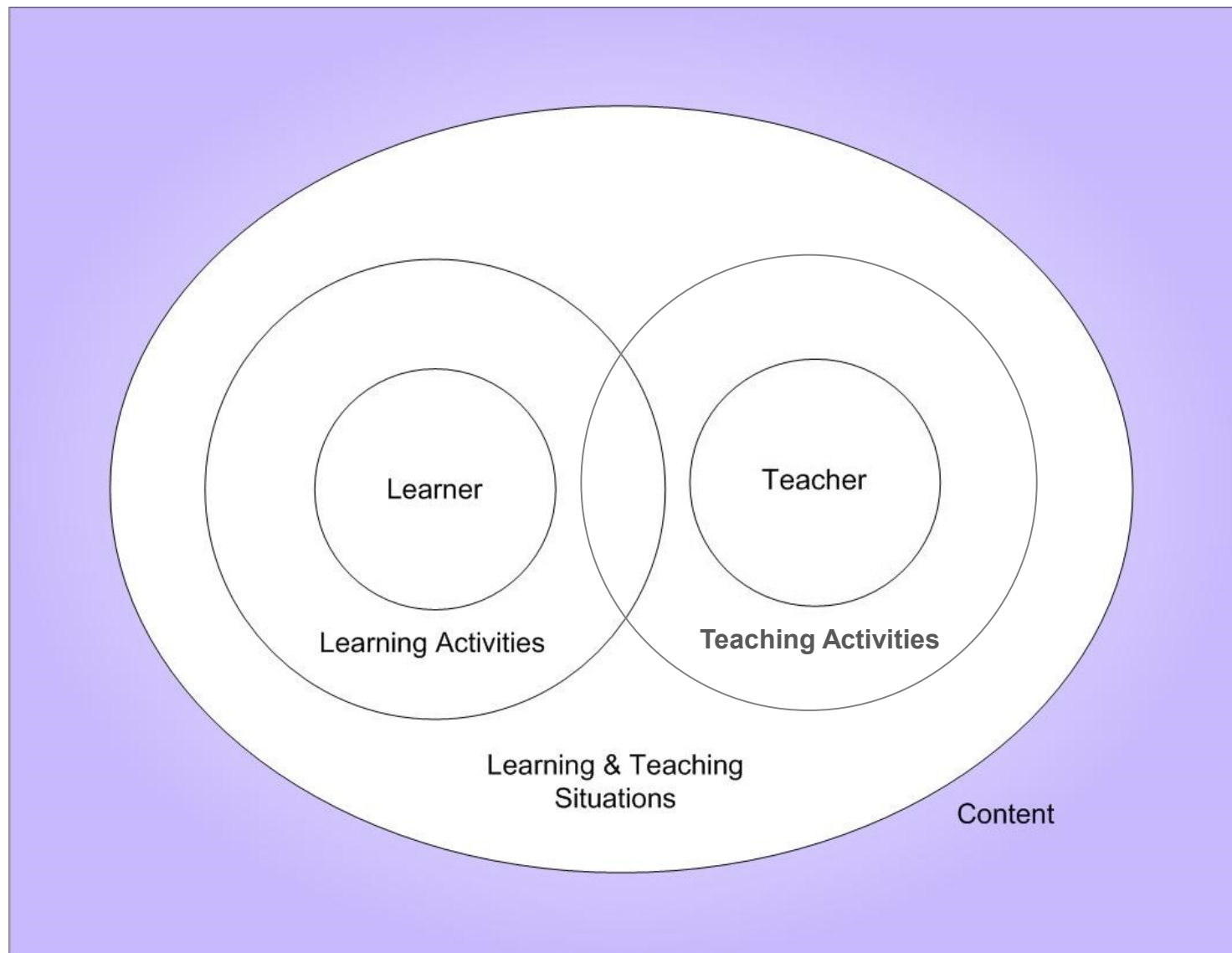www.teachingperspectives.com/tpi/

TPI Profile Sheet

Thank you for taking the TPI. Your results are represented on the graph below. For information on how to interpret your results, please see theInterpretation page

	TRANS = 27	APPREN = 31	DEVEL = 33	NURTUR = 32	SOC REF = 29
B	9	9	11	11	10
I	8	11	11	10	9
A	10	11	11	11	10
TOTAL	27	31	33	32	29

What does the term 'teaching' mean to you?

|				
PRODUCTION (poiesis)	PRACTICE (praxis)	SCIENCE (theoria)	COMMON SENSE	ART
SYSTEM	REFLECTIVE PRACTICE	COMPETENCE	DIRECTING ACTIVITY	IMPARTING INFORMATION
				SUPPORTING TRANSFORMATION
	MANAGED PROCESS	SCHOLARSHIP	PARENT – CHILD INTERACTION	ADULT – ADULT INTERACTION
LEARNING ACTIVITY	ASSESSMENT	PROVIDING RESOURCES	TARGETING LEARNING NEEDS	GENERATING ENTHUSIASM

What do clinical teachers (you) do?

Teaching Activities

1. Facilitating

    a) Facilitating content learning (theoretical & practical)

    b) Facilitating personal & professional development

    c) Relating to learners and providing perspectives

    d) Giving information and demonstrating

    e) Assessment with feedback
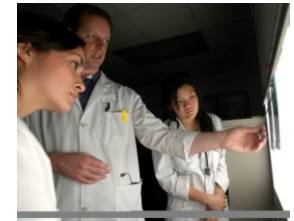
2. Managing

3. Learning & Community-Building

Ross MT, Stenfors-Hayes T (2008) Development of a framework of medical undergraduate teaching activities. *Medical Education* 42: 915-922

Teaching Activities

1. Facilitating

2. Managing

    a) Leading teaching & learning sessions

    b) Session and course organisation & development

    c) Developing learning environments

    d) Curriculum development, governance & policy

    e) Recruitment

3. Learning & Community-Building

Ross MT, Stenfors-Hayes T (2008) Development of a framework of medical undergraduate teaching activities. *Medical Education* 42: 915-922
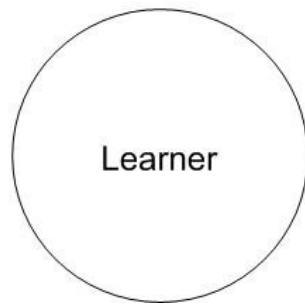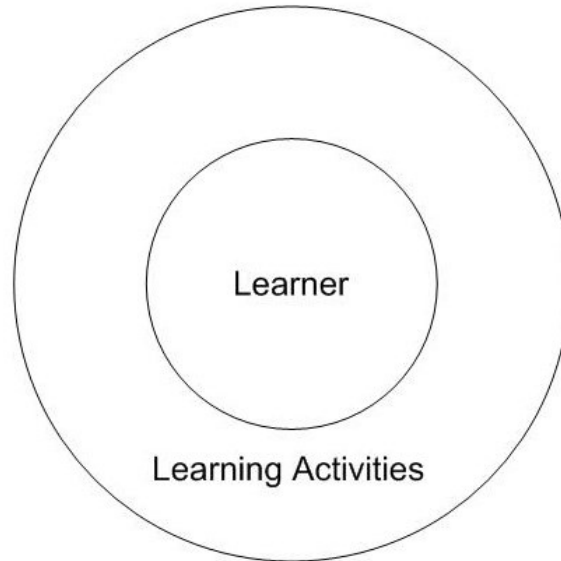
Teaching Activities

1. Facilitating

2. Managing

3. Learning & Community-Building

    a) Informal reflective practice

    b) Formal training & development

    c) Local community-building

    d) National & international community-building
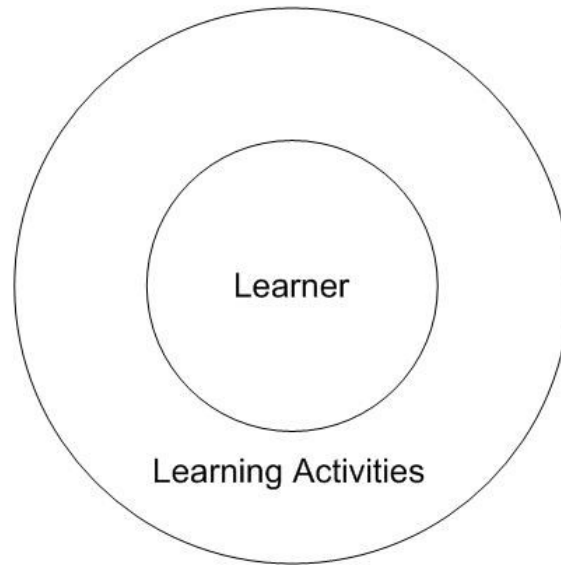
    e) Research

Ross MT, Stenfors-Hayes T (2008) Development of a framework of medical undergraduate teaching activities. *Medical Education* 42: 915-922
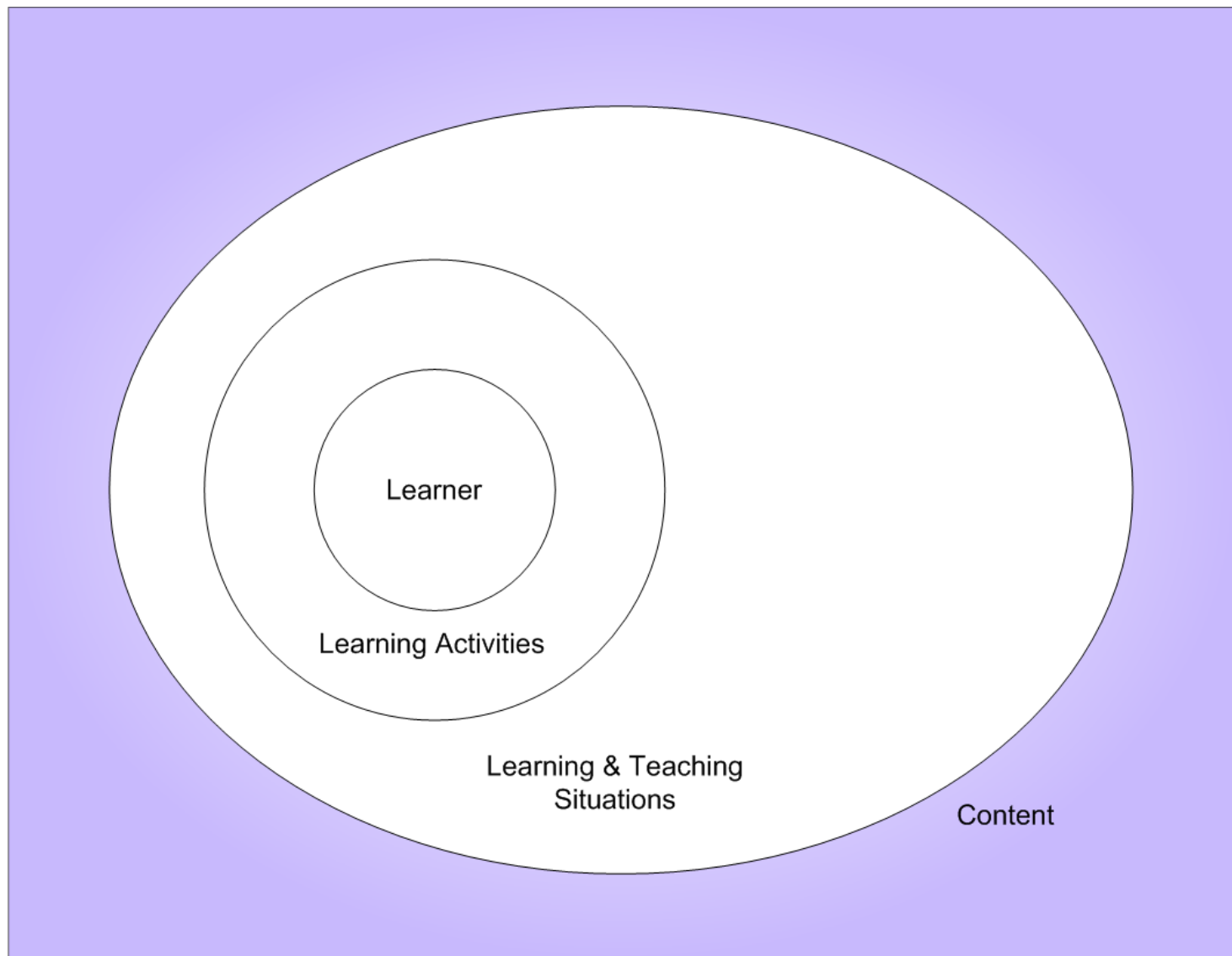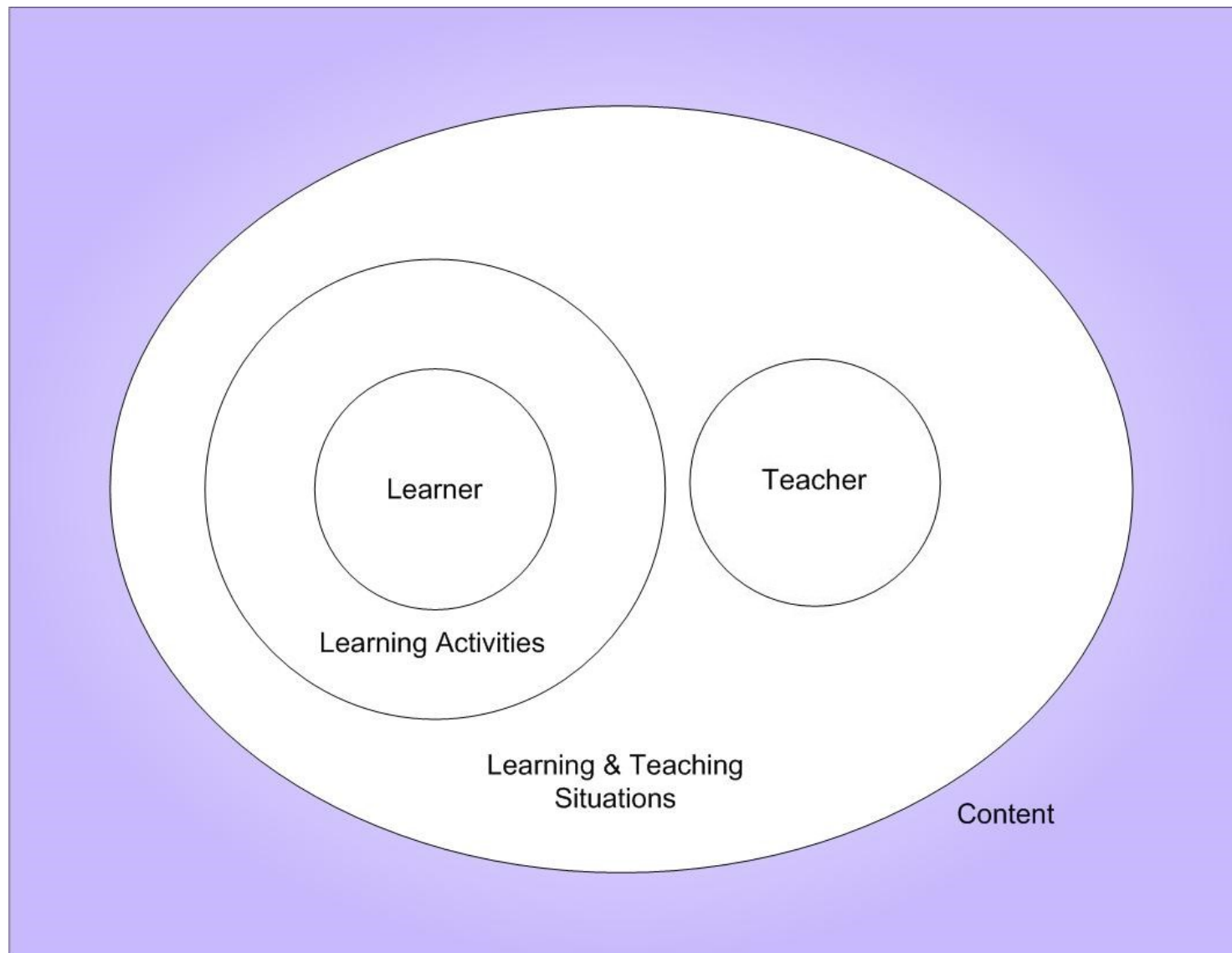
Learner

Learner

Learning Activities

Learner

Learning Activities

Content
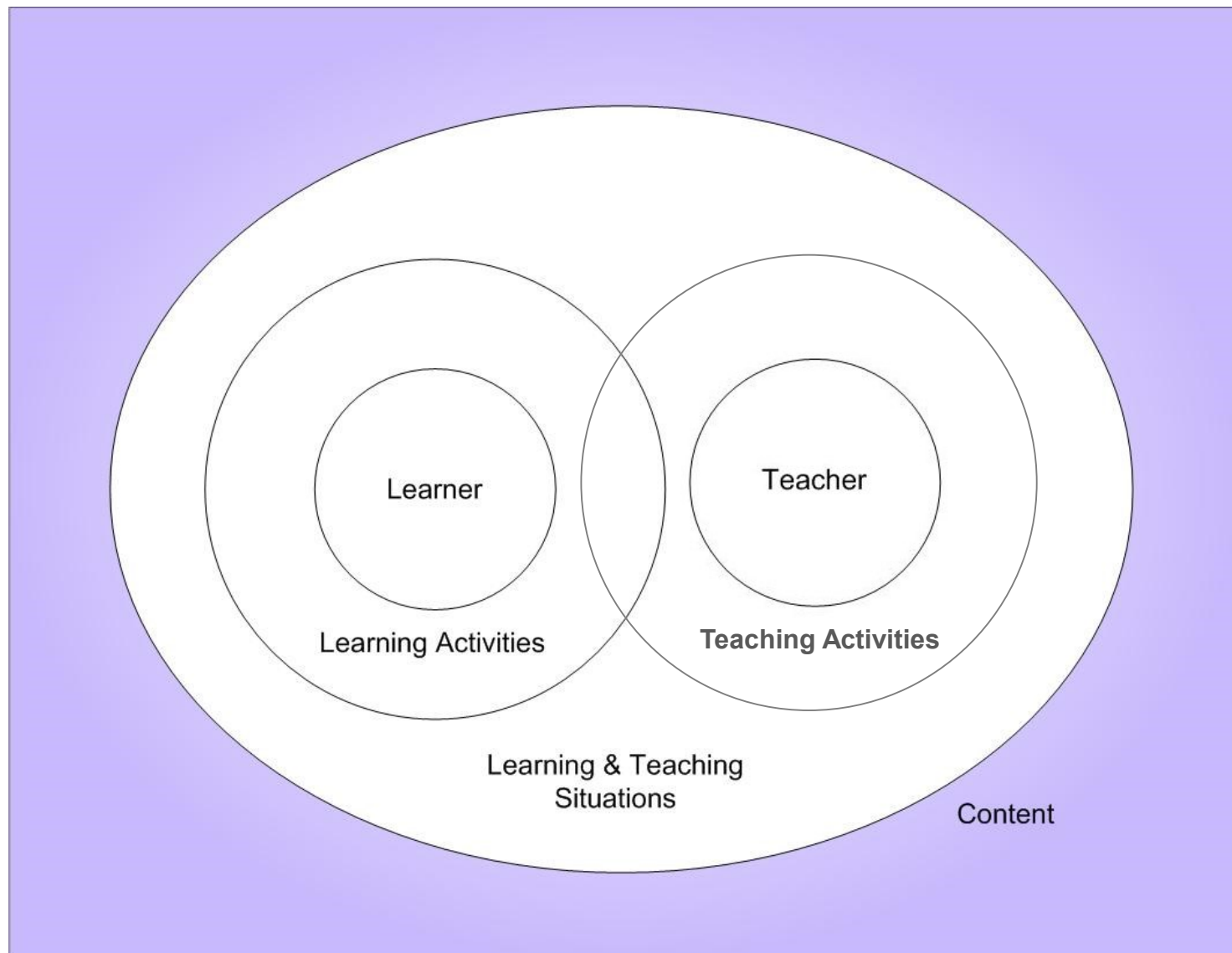
Learner

Learning Activities

Learning & Teaching
Situations

Content

Ross MT, Stenfors-Hayes T (2008) Development of a framework of medical undergraduate teaching activities. *Medical Education* 42: 915-922
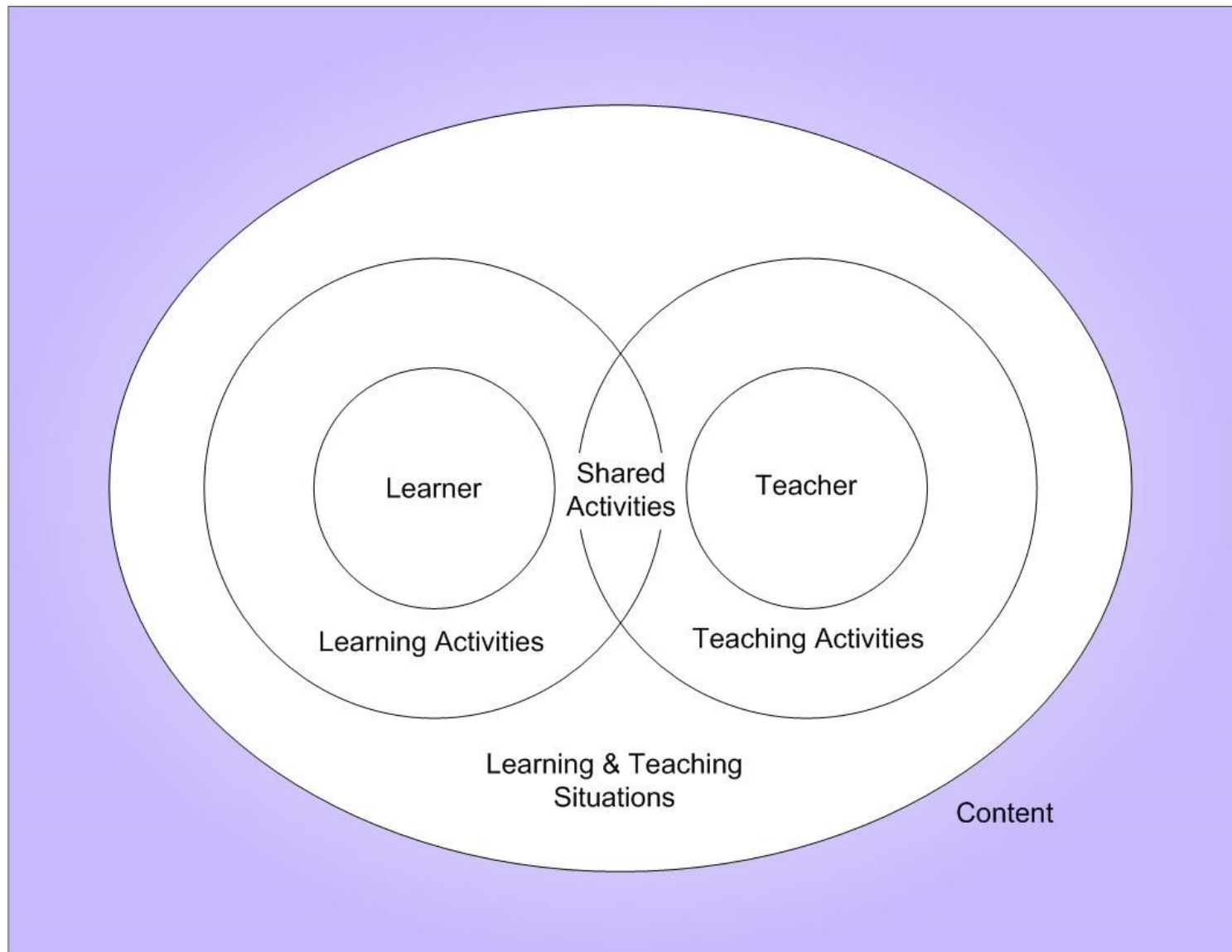
Summary: focus on the learner

#1. Teaching is about facilitating learning

Relatively few 'shared activities' – use wisely!

What the learner does is more important

    than what the teacher does

Find out about learners & teach accordingly

Marton F, Hounsell D, Entwistle N, (eds.) (2005) The experience of learning: implications for teaching and studying in higher education. 3rd (Internet) edition. Edinburgh: Centre for Teaching, Learning and Assessment, The University of Edinburgh.

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Feedback

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What do we mean by 'academic feedback'?

Academic feedback can be defined as:

"Specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance"

Van de Ridder et al (2008) What is feedback in clinical education? Med Ed 42:189-197

Intrinsic vs. extrinsic feedback

"Intrinsic feedback" is a natural consequence of the action (e.g. missing a diagnosis because certain questions were not asked)

"Extrinsic feedback" is an external comment / judgement (e.g. tutor or peer assessment)

Laurillard D (1993) Rethinking University Teaching: a framework for the effective use of educational technology. London, Routledge. (p61-68)

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What is your previous experience of receiving feedback ?
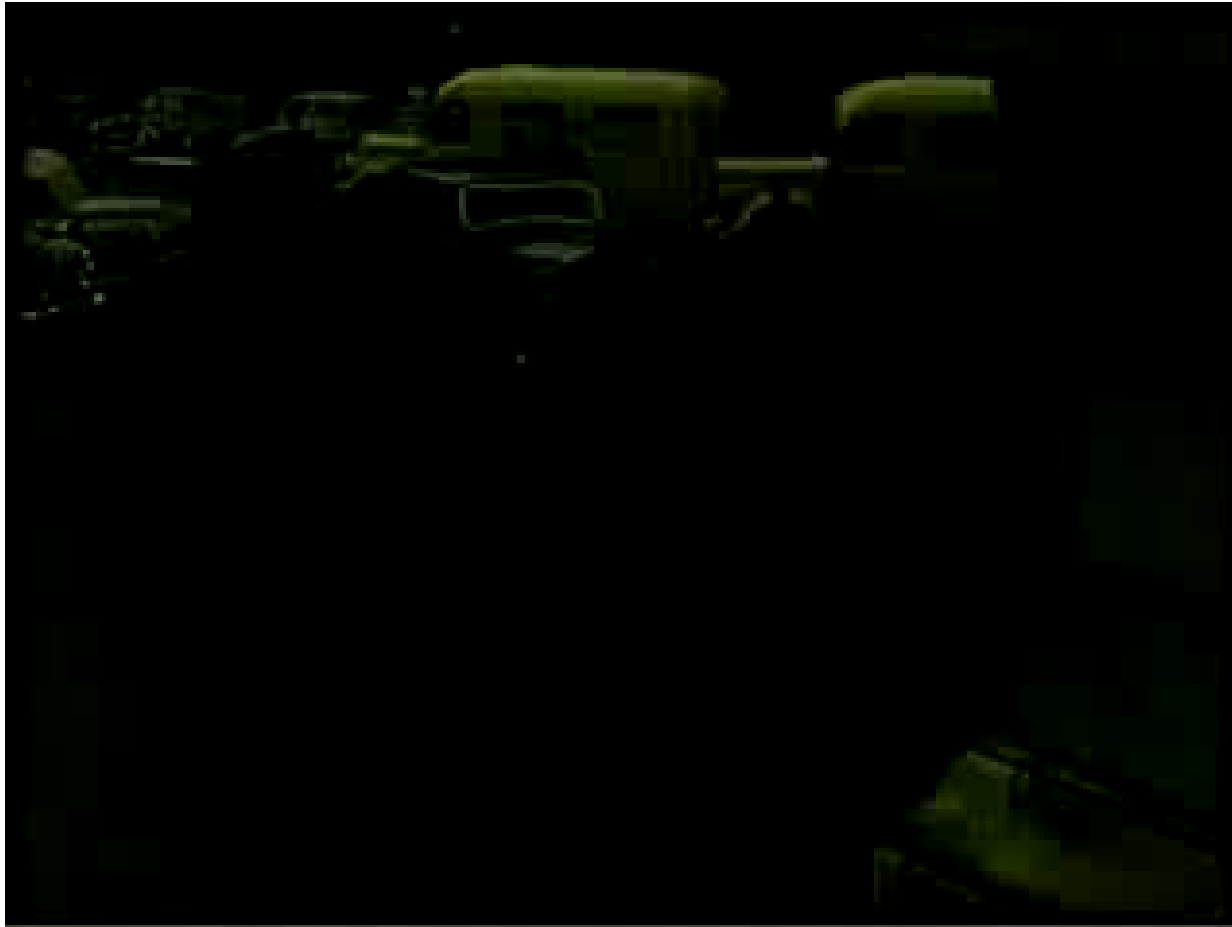
Doctor in the House (1954) Rank Organisation
http://www.youtube.com/watch?v=oVWjAeAa52o

www.thestudentsurvey.com

Are there any principles which guide your feedback ?

Feedback - Ende's principles

Feedback should be…

- well-timed and expected
- teacher & trainee working as allies with common goals
- based on first-hand data
- regulated in quantity & limited to remediable behaviors
- phrased in descriptive non-evaluative language
- about specific performances, not generalizations
- clearly labeled 'subjective' as appropriate
- on decisions / actions vs. assumed intentions / interpretations

Ende J (1983) Feedback in clinical medical education.
Journal of the American Medical Association 250:777-781

Usefulness ≠ Satisfaction

33 students taught to tie square knots

Randomised to receive feedback or compliments

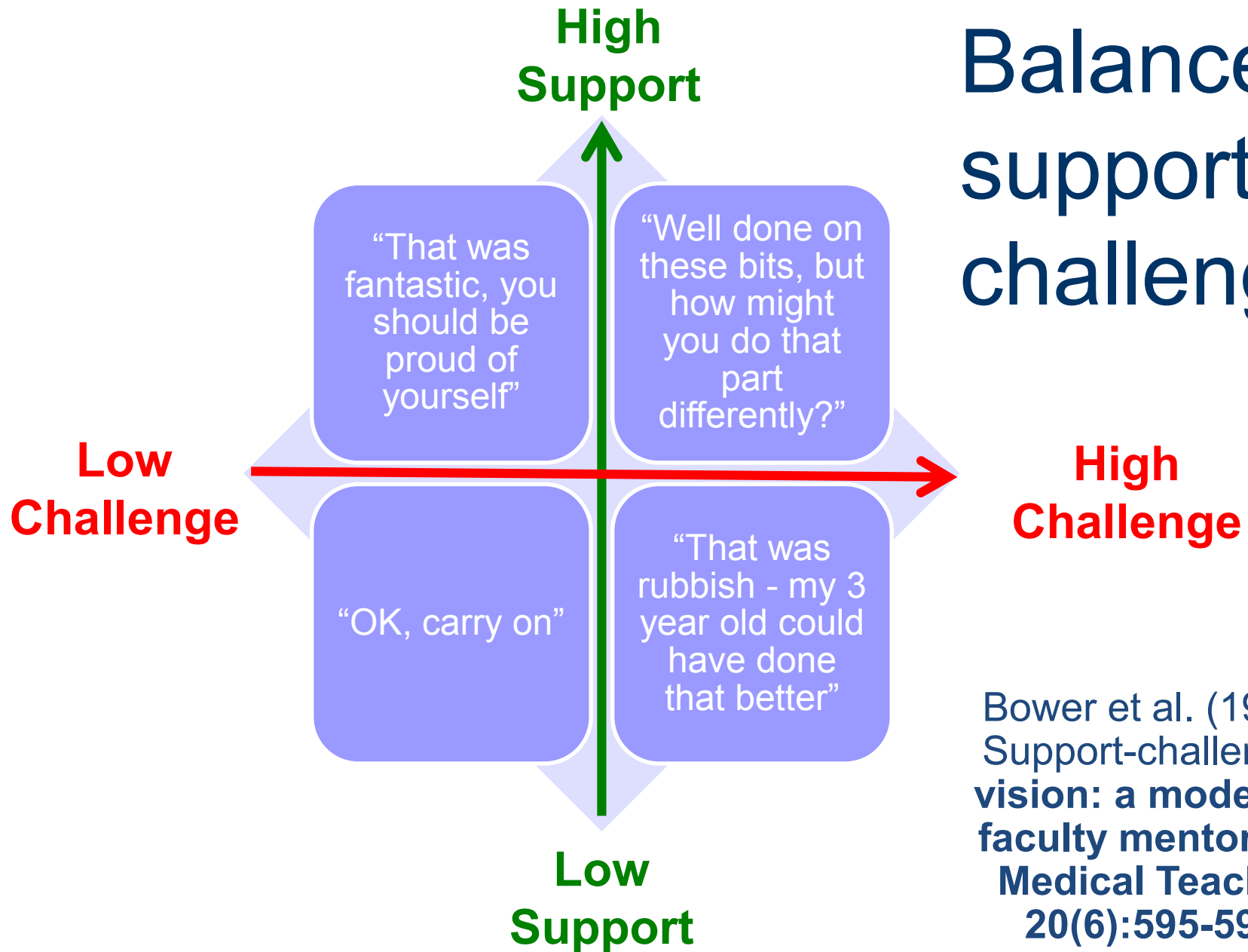Measure performance (before & after) and satisfaction

Performance improved with feedback, not compliments

Satisfaction was much higher in compliments group

Satisfaction is NOT a good measure of usefulness of feedback

Boehler ML et al. (2006) An investigation of medical student reactions to feedback: an RCT. Medical Education 40:746-749

Balance support & challenge

High Support

Low Challenge ———— High Challenge

Low Support

"That was fantastic, you should be proud of yourself"

"Well done on these bits, but how might you do that part differently?"

"OK, carry on"

"That was rubbish - my 3 year old could have done that better"

Bower et al. (1998) Support-challenge-vision: a model for faculty mentoring. Medical Teacher 20(6):595-597

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Timing is important

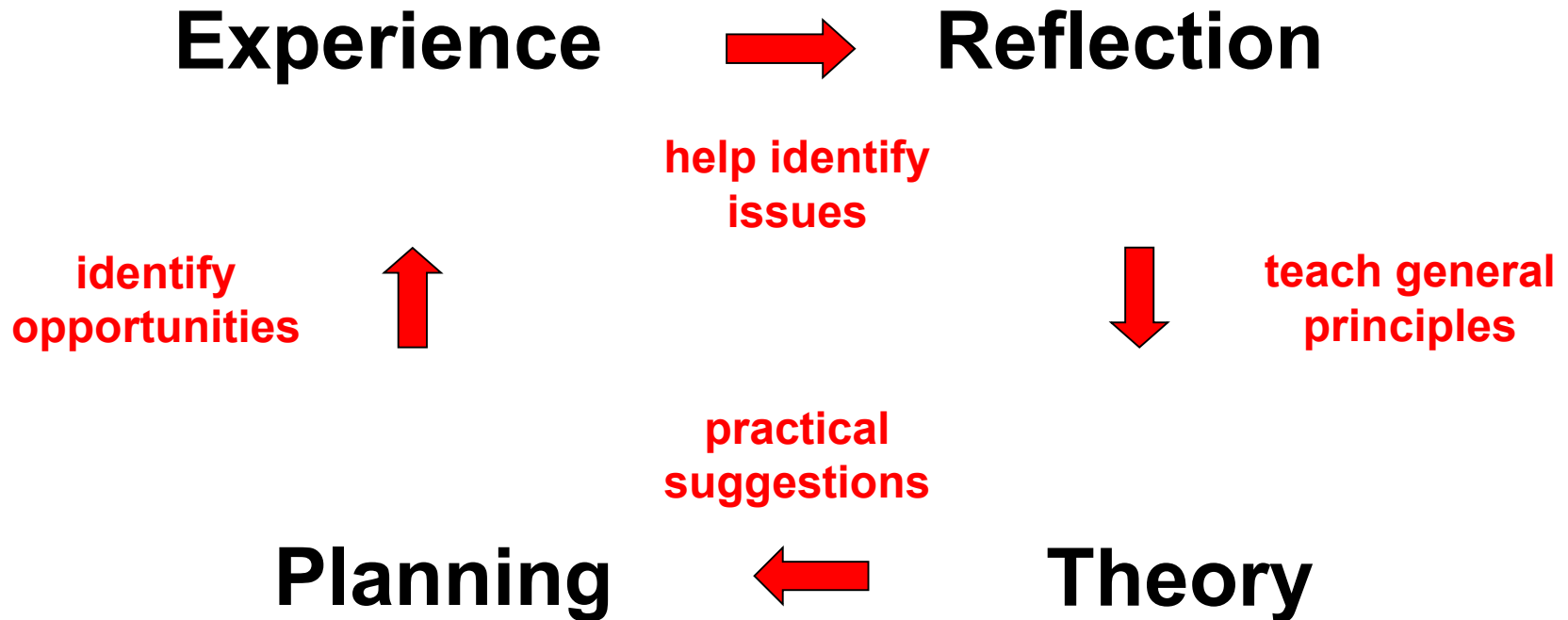12 practice trials on one colonoscopy simulator sequence

Concurrent vs. terminal feedback

Similar on pre-, post- and 1/52 afterward tests

Terminal feedback group significantly better on

transfer test with novel simulator sequence

Walsh et al 2009 Concurrent versus terminal feedback: it may be better to wait. Academic Medicine 84(10):S54-57

Kolb's Cycle

Experience ➡ **Reflection**

help identify issues

identify opportunities

teach general principles

practical suggestions

Planning ⬅ **Theory**
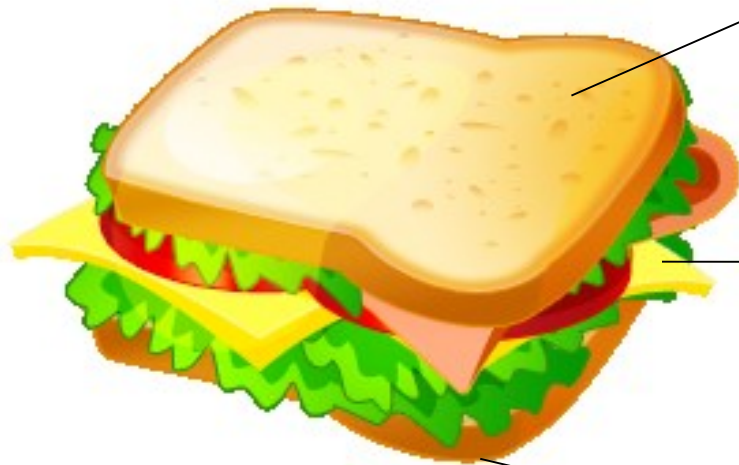
Adapted from: Kolb DA (1984) Experiential learning. Experience as the source of learning and development. New Jersey: Prentice-Hall

Do you use any models or templates for giving feedback?

'Feedback Sandwich'

Positive feedback

Areas for improvement

Positive feedback

'Traffic Lights'

What to Stop

What / How to Change

What to Continue

Feedback - Pendleton's 'rules'

- Clarify factual details

- Learner comments on what went well

- Teacher comments on what went well

- Learner identifies areas for improvement

- Teacher identifies areas for improvement

- Discuss suggestions for change

Pendleton D, Schofield T, Tate P, Havelock P (1984) The consultation: an approach to learning and teaching. OUP, Oxford

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ALOBA
('Agenda-Led Objective Based Analysis')

- Learner identifies areas they want help with

- Learner & tutor define goals trying to achieve

- Learner then tutor & group suggest ways

- Tutor may highlight other areas of need / theory

- Learner rehearses strategies / skills with feedback

- Facilitator summarises achievement / future goals

Silverman et al (1996) The Calgary-Cambridge approach to communication skills teaching 1: Agenda-led outcome based analysis of the consultation. Education for General Practice 7:288-299

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'One minute preceptor'

- Get commitment (Diagnosis & plan)
- Probe for supporting evidence
- Teach general principles
- Reinforce what was done right
- Correct mistakes

Neher JO, Gordon KC, Meyer B, Stevens N. A five-step microskills model of clinical teaching. J Am Board Fam Prac. 1992;5:419-24

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Other Feedback Models

'**SET-GO**' – what did you **S**ee; what **E**lse did you see; what did you **T**hink; what **G**oal(s) we'd like to achieve; any **O**ffers on how to get there? (often used with ALOBA)

W3 – **W**hat went well; **W**hat didn't go well; **W**hat could you do differently next time?

'**SHIM**' – what to **S**top; **H**ow to **I**mprove; what to **M**aintain - variation of traffic lights

Homework for tomorrow

Reflect on Ende's principles and at least one feedback model (e.g. 'Sandwich' or Pendleton)

Reflect on which aspects of large group teaching you want to give / receive feedback

Think about ways you will try to ensure your feedback is appropriate, specific, descriptive and focused on remediable behaviours

"To a celtic spirit", Morton tapestry by Alan Davie