

Imperial College  
London

# Reciprocal emotional interaction in university classrooms:



## Who influences feelings of coping and succeeding, and how?

Kate Ippolito, Principal Teaching Fellow, Centre for  
Higher Education Research and Scholarship

Thanks to all my research participants and Professor Martyn Kingsbury

# Link between learning and mental health and well-being?



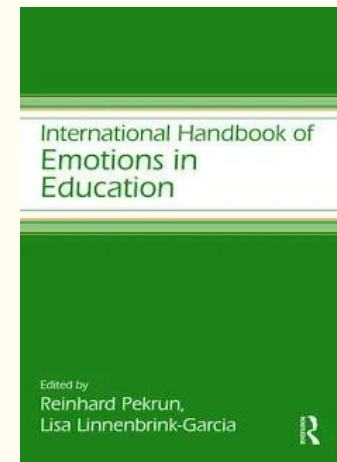
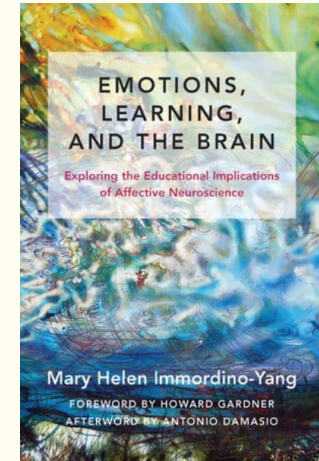
What are the positive and negative impacts of university learning, teaching and assessment on mental health and well-being?

What can we do and what are we doing to promote and support mental health and well-being through learning and teaching?

What emotions are actually being experienced in learning settings and why? Which are important for learning?

**Imperial College Mental Health and Well-being Strategy**

- Neurologically impossible to remember material, engage in complex thoughts, make meaningful decisions, transfer classroom learning to real life without emotion (Immordino-Yang, 2016).
- “Emotions are both **experienced in** educational settings as well as **instrumental for** academic achievement and personal growth” (Pekrun & Linnenbrink-Garcia, 2014: p.1).



# How do you feel and why?

Consider a recent teaching or learning experience that made you feel good. Make a note of:

- A specific emotion that you remember experiencing
- Why you think you experienced this emotion

Speak to your neighbour about it.

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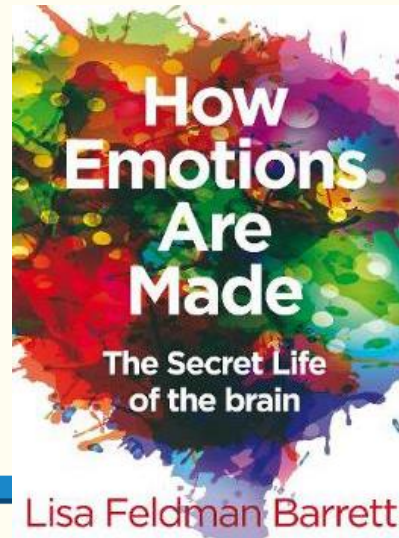


## Theory of constructed emotion (Barrett, 2017)

Emotion as a **goal-based concept** which individuals construct based on physiological sensations, social context, experience and what they want to achieve.

“Emotions are not reactions *to* the world; they are your constructions *of* the world” (Barrett, 2017: 104).

“We transmit these concepts to each other, wiring each other’s brains for the social world” (Barrett, 2017: 134).



# What is emotion?

**Control – Value Theory of Achievement Emotion**  
(Pekrun & Perry, 2014)

**Control appraisal**  
Do I have any choice?  
Am I competent at this?  
What’s the likely outcome?

**Value appraisal**  
Is this interesting / useful / important to me?

When first entering this week's session I found myself very **anxious**. I was worried that I would be out of my depth...

I think that these emotions emerged because I feel that I must **meet the level of ability** of those students around me that may have **more experience**. This **helped me to focus** on the activities as I didn't want to appear misinformed, but for the same reason I was also **less willing to share my opinions**.

However, as the session progressed I **gained confidence** in **not being judged**. I found the ability to talk through different ideas of the impact of emotions and finding out my peers' thoughts...enlightening. I hope that this is something that I will be able to transfer to my degree allowing me to speak about **how I think a problem should be approached without the worry of others believing I am inferior**.

Fostering psychological safety

# Role of emotion in learning research

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8 purposively sampled UG modules in:

- Electrical and Electronic Engineering
- Mechanical Engineering
- Life Sciences
- Chemistry
- Physics
- MBBS x 2
- iExplore STEM – Science of Learning

5 x 10 weeks teaching experience, assessing student work, reflective log (n=205)  
How session made you feel?  
Why?  
Relationship to experiences of learning on my degree?

Group interviews with 3 teaching staff x 7  
What emotions do you anticipate, plan for, hope for, support, experience yourselves?

Student Questionnaire (n=279)  
In session

Group interviews with teaching staff  
Based on what is of interest in student data

1. How is this session / project making you feel?
2. Why do you think you feel this way?
3. Do you think this feeling has an activating (makes you want to learn) or deactivating (puts you off learning) effect on your learning? Please give a reason for your response.
4. How does the teacher contribute to this feeling?
5. How do your student peers contribute to this feeling?
6. How do you contribute to this feeling?
7. How do you think your teacher would say they feel whilst teaching? Please give a reason for your response.
8. How do you think your student peers would say they feel about this session / project? Please give a reason for your response.



**What?** A dynamic process in which socialising agents (Valiente et al., 2020) facilitate development of emotional competence, including **community-relevant** ways of experiencing, understanding, expressing and regulating emotions (Eisenberg, Cumberland and Spinard, 1998).

**Who?** Student peers & staff who teach and support learning.

**How?** Responding to emotion, directly guiding, modelling emotional display and regulation.



# Why is emotion socialisation relevant to us?

- Importance of role of emotion in active (Fry, Ketteridge, Marshall, 2015) and transformative learning (Mezirow, 1991)
- Move away from primary socialisers
- Very international with diverse cultural emotional display rules (Mesquita, De Leersnyder & Boiger, 2016)
- Relationship between emotion regulation and well-being (Gross, 2015)
- Student age group – heightened emotion and awareness
- Interruption to normal emotion socialisation due to pandemic e.g. high levels of reported loneliness (Cibyl, 2022)
- Future importance amongst professionals (Bolier et al. 2018)

# Coping and succeeding: Getting lost...and catching up

**Feeling lost:** “It made me feel really stupid if I have to be honest - I feel so lost all the time and there are so many word and rules to remember. The teaching makes sense in class but as soon as I step out I am completely lost again... I want to say I’m motivated but seeing everyone miles ahead of me in understanding is really demotivating... Made me feel even more stupid..”

**Catching up:** “I feel decent after this session... I have for once fully understood the content, and mostly caught up with the speed of my teammates.”

**Resilient self-efficacy building:** “It is kind of a circle. You get discouraged a bit in the beginning especially when you realize how stupid you are. But when you get it done, you will regain and reconstruct your confidence, a even stronger one than before.”

## Baxter Magolda's epistemological reflection model

- **Absolute knowing** – there's a right and wrong answer, teacher knows, student role is to obtain knowledge, uncertainty means not knowing correct answer.
- **Transitional knowing** - some knowledge is certain, some uncertain, explore with peers through exchanging viewpoints, accept teacher doesn't always know.
- **Independent knowing** - most knowledge is uncertain. Learners recognize that they and peers create, expect encouragement and reward for thinking and production.
- **Contextual knowing** – able to make judgments, integrate and apply knowledge, within a context. Balance ideas of others with contextually appropriate evidence. (Bock, 1999)

## Teacher emotions about (not) knowing

“Personally, I really, really struggle with those moments when the students ask me something that I can't answer. I really, really hate that...obviously, I can't cannot know everything. But still, I just can't deal with the feeling. And we've got some really good students. ”

“I don't enjoy maths. And actually, that's the only approach that I've kind of felt confident taking with this is to be completely honest. And say, ‘I'm not a mathematician. And I, you know, I'm very much in the same boat as you. And we'll work through this stuff together.’ And I think they, I think they appreciate it.”

## Anticipating and planning for discomfort of not knowing

“We can go from looking at, you know, **cellular proteins** to talking about **empathy**, you know, an hour and a half later. That's a high level of challenge for any tutor...

.... we always want [tutors] to relay to the students... ‘you may ask us a question, **we may not know the answer and that's alright**, you know, because no one knows everything’. And you need to get used to that as a **future doctor**... I've even been in sessions, where it's been like ‘I've no idea’, but I'll Google quickly while you're doing the next task. So in that way, I guess if that's giving a comfort level to your tutors. But I think it's also in terms of managing the emotion of your students.”

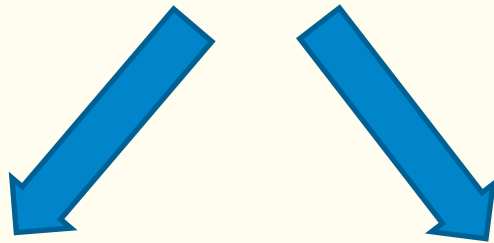
# Evidence for goal achievement - Social comparison

Based on innate human drive to evaluate our abilities  
and opinions (Festinger, 1954).

Upward  
social  
comparison

or

Downward  
social  
comparison



Favourable  
= Inspiration  
Similar

Unfavourable  
= Inferiority  
Dissimilar

Self-concept



Burleston, Leach and Harrington, 2005

Normalising social comparison  
More evidence-informed

**Unfavourable upward:** “I don’t feel like most are struggling as much as I am and since they’re naturally better students, they have an easier time than I do.”

**Upward inspiration:** “They showed great progress in every week and this helps me to get motivated.”

**Collaborative coping models:** “We are all trying and have different strength. Everyone is sharing their thoughts and explaining how they reached each answer.”

(Bandura, 1994; Schunk & Hanson, 1985).



## Empathy: Context relevant tool

“Our ability to perceive, understand, and respond to the experiences and behavior of others... robustly **situated practice**...that encompass not only the **dynamics** of our face-to-face engagements but also the **complex environments in which these engagements develop and take shape**” (Szanto & Krueger, 2019:153).

### Empathy comprises:

- **Emotional empathy – experience sharing (emotional contagion)** (Hatfield, Rapson & Le, 2009)
- Cognitive empathy – mentalising, understanding how others may feel or be thinking
- **Prosocial motivation**

“It was much more difficult for me to have a feel for how much they were enjoying it last year when it was all online...I found it very difficult to seem enthusiastic when I was teaching online, I'm afraid. I really, really tried to sort of get myself in a positive frame of mind about it. But I was, I was a bit worried...that I wasn't doing anything to enthuse and inspire the students.”

“I find online completely different and much harder. its hard to ask for help and to give help to others as you cant tell when they are struggling.”

## Reciprocal empathy as a tool for coping

"Everyone feels the same way, so I don't feel as isolated or concerned that I'm the only one feeling this way. So in that sense there is a group morale in that we all 'struggle together' but it's helpful to lean on others and talk to each other when we're stressed out."

"I try to contribute effectively to the team in areas I'm confident about, so I can be supported where I am less confident."



## Reciprocal empathy as a measure of success



“They are non-judgemental and helpful...I aim to reflect the same feeling.”

“I always enjoy these sessions. I feel good, and helpful...I spent a lot of time trying to get less incompetent in R - I still don't know much statistics, but I can help other people in my group with the programming sometimes and that's rewarding.”

- Tool for and outcome of emotion socialisation
- Facilitates coping and succeeding of students and staff

“I definitely think that this new way of **teaching was difficult** for them too and they may also feel **sad** that they **could not help and interact** with as many students.”

“**Hopefully proud** of their explanations, as they helped the students (including myself) a great deal to understand the concepts.”

“seems to make out like it’s **easier than it is.**”



“it's fantastic, this is what I wanted to do at University.”

That is **incredibly satisfying**...It was an experiment in teaching and you actually got the result.”

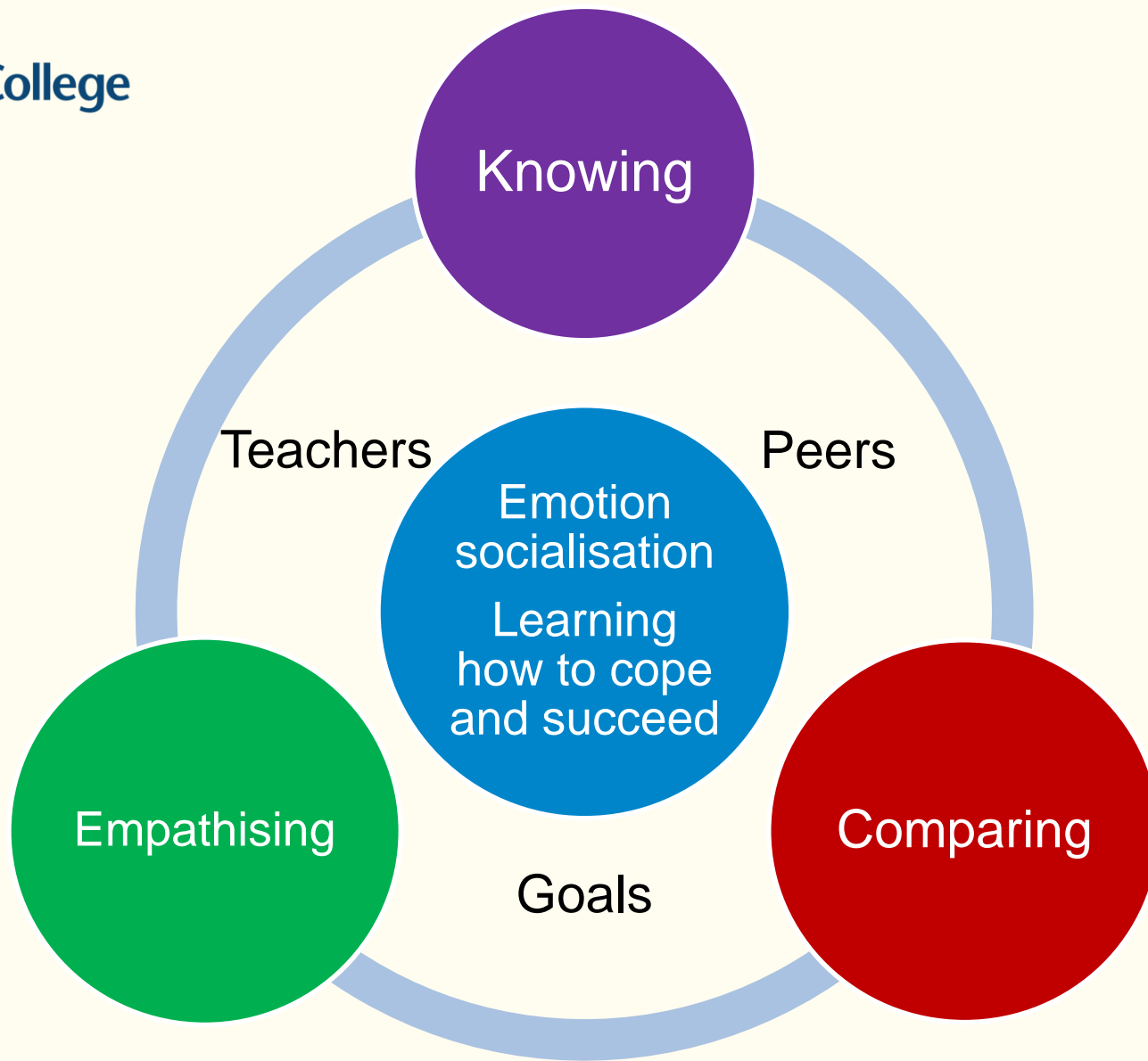
What's the evidence of teaching goal success?

## Coping and Succeeding for Teaching Staff

Teaching Evaluation:  
Incomplete emotion  
socialisation



Emotion-informed  
Evaluation of Teaching  
and Learning



## Challenges of emotion socialisation

- Managing cognitive and emotional load is demanding.
  - "Managing everyone's demand is impossible...making my contribution in the project feel unappreciated"
- Normalising and spreading unhelpful emotion and coping strategies – it's normal to feel overwhelmed and to overwork.
- Not everyone will feel willing and able to socialise emotion in more explicit ways. Tension between credibility and vulnerability (Bearman and Molloy, 2017).
- Importance of maintaining boundaries – prerequisite to empathy (Brown, 2021).



# Implications for Peer learning & Groupwork

- Be explicit about the stage of knowing we're working at and potential for uncertainty and discomfort.
- Stress that working with peers is opportunity for situated emotional learning, essential for academic coping and success (not just future employment).
- Allow space and time for peers to form trusting learning relationships.
- Scaffold reflection on emotional impact of learning and growing competence over time e.g. using Prof. Marc Brackett's RULER (also see Ippolito et al., 2020 & Charalambous, Hodge & Ippolito, 2020).
- Encourage evidence-informed social comparison, normalising comparison and collaborative coping models, through talking about learning challenges and strategies.
- Align peer feedback processes with these goals.

# Implications for Evaluation of Learning and Teaching

- Consider what success in your STEMM learning setting looks like. Develop this into clear and confident rationale and evaluate on this basis.
- Gather a variety of emotion-related information at useful times.
  - How is this session / module / project making you feel?
  - Why do you think you feel that way?
  - How do peers / teachers / you contribute to it?
- Giving and receiving emotion-related data builds emotional competence.
- Make meaning of it as subjective, context-dependent data, not objective fact.
- Model how you manage emotions linked to receiving feedback with colleagues and students.

- Barrett, L. F. (2017) **How emotions are made: the secret life of the brain**. London: Pan Macmillan.
- Bock, M. (1999) Ch 3 Baxter Magolda's Epistemological Reflection Model in PG Love, VL Guthrie (Eds.) [Understanding and Applying Cognitive Development Theory: New Directions for Student Services, Number 88](#)
- Bolier M, Doulougeri K, de Vries J, Helmich E. (2018) 'You put up a certain attitude': a 6-year qualitative study of emotional socialisation. **Medical Education** Oct;52(10):1041-1051.
- Brackett, M. (2019) **Permission to Feel: Unlocking the Power of Emotions to Help Our Kids, Ourselves, and Our Society Thrive**. London: Celadon Books.
- Brown, B. (2021) **Atlas of the Heart. Mapping meaningful connection and language of human experience**. London: Vermilion
- Burleson, K., Leach, C.W. and Harrington, D.M., (2005) Upward social comparison and self-concept: Inspiration and inferiority among art students in an advanced programme. **British Journal of Social Psychology**, 44(1), pp.109-123
- Charalambous, M., Hodge, J. A. and Ippolito, K. (2020) 'Statistically significant learning experiences: towards building self-efficacy of undergraduate statistics learners through team-based learning', **Educational Action Research**, pp. 1-19.
- Cibyl (2022) **Student Mental Health Study** <https://cibyl.com/cibyl-insights/student-mental-health-study-2022>
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental Socialization of Emotion. **Psychological Inquiry**, 9, 241-273.
- Fry, H., Ketteridge, S. and Marshall, S. (2015) **A Handbook for Teaching and Learning in Higher Education: Enhancing academic practice**. London: Routledge.
- Gross, J. (2015) Emotion Regulation: Current Status and Future Prospects, **Psychological Inquiry**, 26:1, 1-26, DOI: 10.1080/1047840X.2014.940781

- Hatfield, E., Rapson, R. L., & Le, Y. L. (2009). Emotional Contagion and Empathy. In J. Decety & W. Ickes (Eds.), **The Social Neuroscience of Empathy**. Cambridge, MA: MIT.
- Immordino-Yang, M. H. (2016) **Emotions, learning and the brain. Exploring the educational implications of affective neuroscience**. London: WW Norton Co.
- Ippolito K, Boyd N, Bale R, Kingsbury M. (2020) Emotions as pedagogical tools: the role for educational developers in university learning and beyond, **ETH Learning and Teaching Journal**, Vol: 2, Pages: 322-326
- Mesquita, De Leersnyder & Boiger, (2016) 'The cultural psychology of emotions' in Barrett, L.F., Lewis, M. and Haviland-Jones, J. (eds.) **Handbook of emotions**. 4th ed. New York: The Guildford Press, pp. 3-48.
- Mezirow, J. (1991) **Transformative Dimensions of Adult Learning**. San Francisco, CA: Jossey-Bass.
- Molloy E, Bearman M. (2019) Embracing the tension between vulnerability and credibility: 'intellectual candour' in health professions education. **Medical Education** Jan;53(1):32-41.
- Pekrun, R. & Linnenbrink-Garcia, L. (2014) (Eds.). **International Handbook of Emotions in Education**. New York: Routledge.
- Pekrun, R. & Perry, R.P. (2014) Control Value Theory of Achievement Emotion in R. Pekrun & L. Linnenbrink-Garcia (Eds.). **International Handbook of Emotions in Education**. New York: Routledge.
- Szanto, T., Krueger, J. (2019) Introduction: Empathy, Shared Emotions, and Social Identity. **Topoi** 38, 153–162
- UUK (2021) **Stepchange Mentally Healthy Universities**  
<https://www.universitiesuk.ac.uk/sites/default/files/field/downloads/2021-07/uuk-stepchange-mhu.pdf>
- Valiente, C., Swanson, J., DeLay, D., Fraser, A. M., & Parker, J. H. (2020) Emotion-related socialization in the classroom: Considering the roles of teachers, peers, and the classroom context. **Developmental Psychology**. 56 (3), 578–594.
- van Kleef, G. A. (2009). How emotions regulate social life: The emotions as social information (EASI) model. **Current Directions in Psychological Science**, 18(3), 184-188.