

Cognition and Learning

Norazila Abd Aziz

Fitri Suraya Mohamad

Julia Lee Ai Cheng

Universiti Malaysia Sarawak



This OpenCourseWare@UNIMAS and its related course materials are licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.



Topic 5

Emotions in Learning



What are Emotions?

- ▶ Emotions = arousal.
- ▶ Someone puts a knife at your back while you are trying to withdraw money at the ATM. You may feel frighten, angry and the arousal results in a particular action / behavior.



Emotions

▶ Anger

- Disgust
- Envy
- Exasperation
- Irritation
- Rage
- Torment

▶ Fear

- Alarm
- anxiety

▶ Joy

- Cheerfulness
- Contentment
- Enthrallment
- Optimism
- Pride
- Relief
- Zest

▶ Love

- Like, Infatuation, Lust
- Crush on someone
- Love of a parent
- Affection, Longing



Emotions

▶ Sadness

- Disappointment
- Neglect
- Sadness
- Shame
- Suffering
- Sympathy

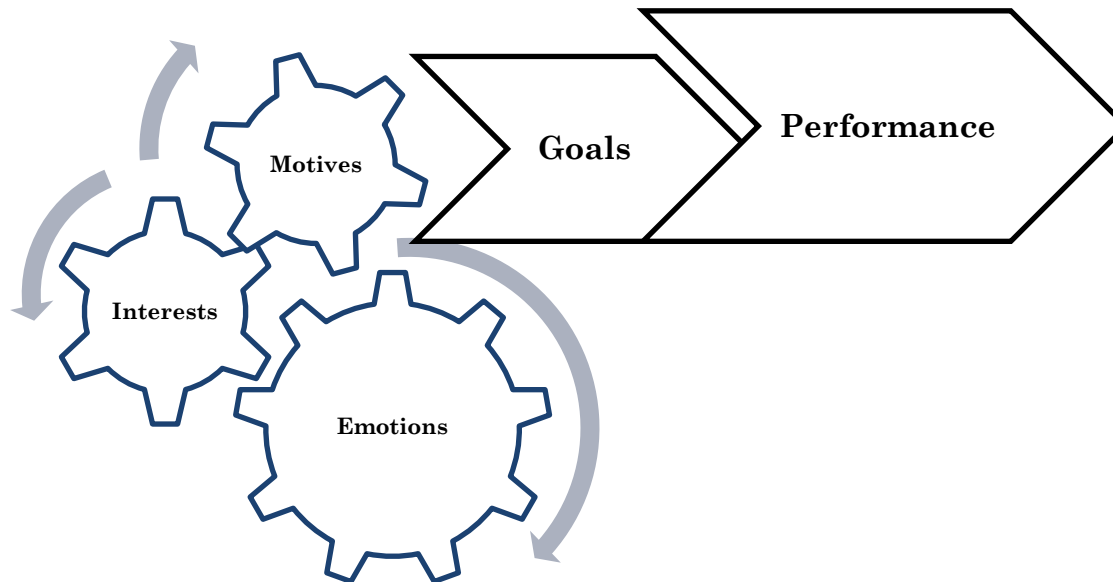
▶ Surprise

- Shock
- bewildered



How is Emotion Related to Cognition?

- Emotions are connected with our interests.
- Our *interests* create *motives*.
- *Motives* create *goals* → leading to *performance* in what we do.



Does Our Cognition Shape Our Emotion?

- Whatever emotion we feel as a result of a given event is primarily determined by **how we appraise the event.**
- Events that are not goal-related are not appraised since we do not have to respond to them...hence feel no emotion when they occur.
 - E.g.: work that is not appraise does not cause as much emotion as work that is appraised
 - **Do you agree?**



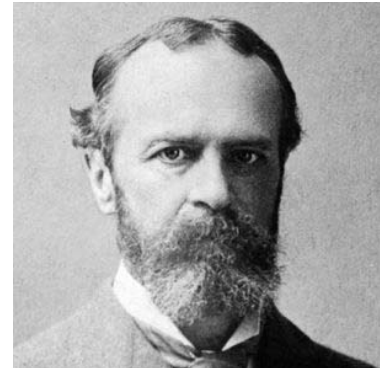
Does Our Cognition Shape Our Emotion?

- Goal-related events either help us reach some goal → *positive emotion*.
- Goal-related events hinder us in reaching some goal → *negative emotion*.



The Principles of Psychology (1890)

- Core of an emotion is pattern of bodily response
 - Emotions = the experience of sets of bodily changes that occur in response to emotive stimuli.
 - Emotions move human bodily
- Experience of many emotions – set of *changes of the autonomic nervous system*
 - Part of nervous system that supplies inner organs including the heart, the blood vessels, the stomach, and the sweat glands.
- Emotions gives ‘*color & warmth*’ to experience.



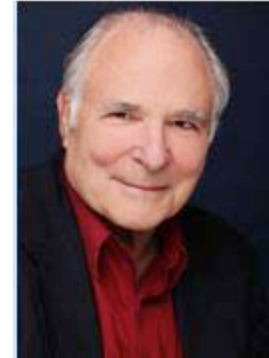
William James

Image source:
<http://www.biography.com/people/william-james-9352726>



Basic Emotions

- Basic emotions:
 - Happiness, Anger, Fear,
 - Sadness, Disgust, and Surprise
- All other emotions are **varieties of basic emotions.**
- Our *faces* are the *primary location* for our *universal signal system* for *expressing emotions.*
- All emotions essential to life
 - the question is how to optimize what is constructive and minimize what is destructive.



Paul Ekman



Image source: <http://education-portal.com/academy/lesson/paul-ekman-emotion-face-training-study-lesson-quiz.html>



Autonomic Nervous System?

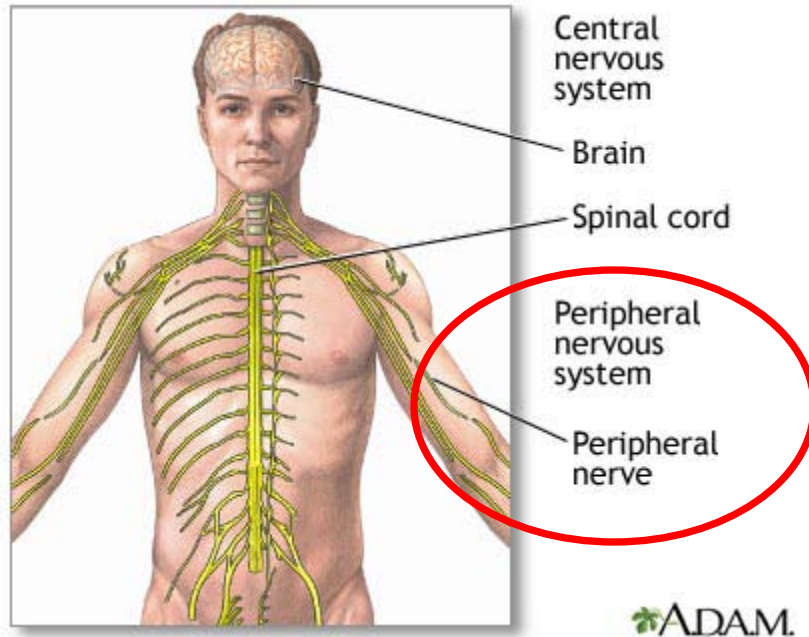


Image source:
<http://www.nlm.nih.gov/medlineplus/autonomicnervousystemdisorders.html>

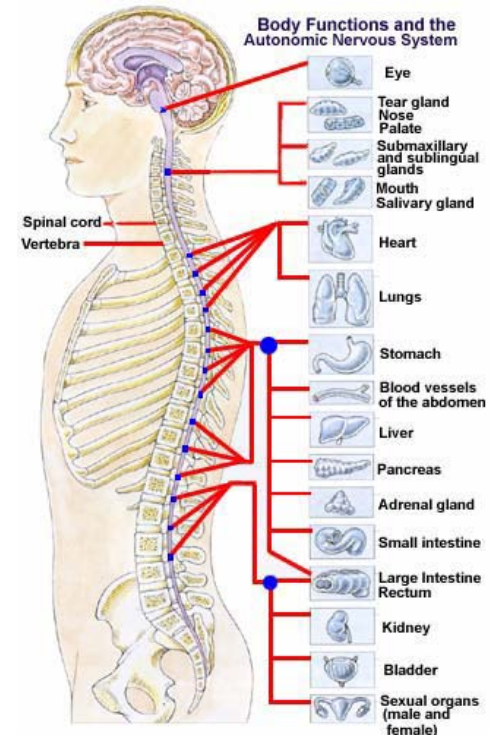


Image source:
<http://www.pinterest.com/exmovere/autonomic-nervous-functions/>

Emotion involves the entire nervous system.

E.g., stimulates the sweat glands; dilates the blood vessels in large muscles; constricts the blood vessels in the rest of the body; and increases the heart rate.

Emotion & Cognition

- Emotion and cognition dynamically intertwined and interdependent in terms of both neurology and psychology.
- Emotion and cognition not only interact, but their integration is necessary for *adaptive learning*.

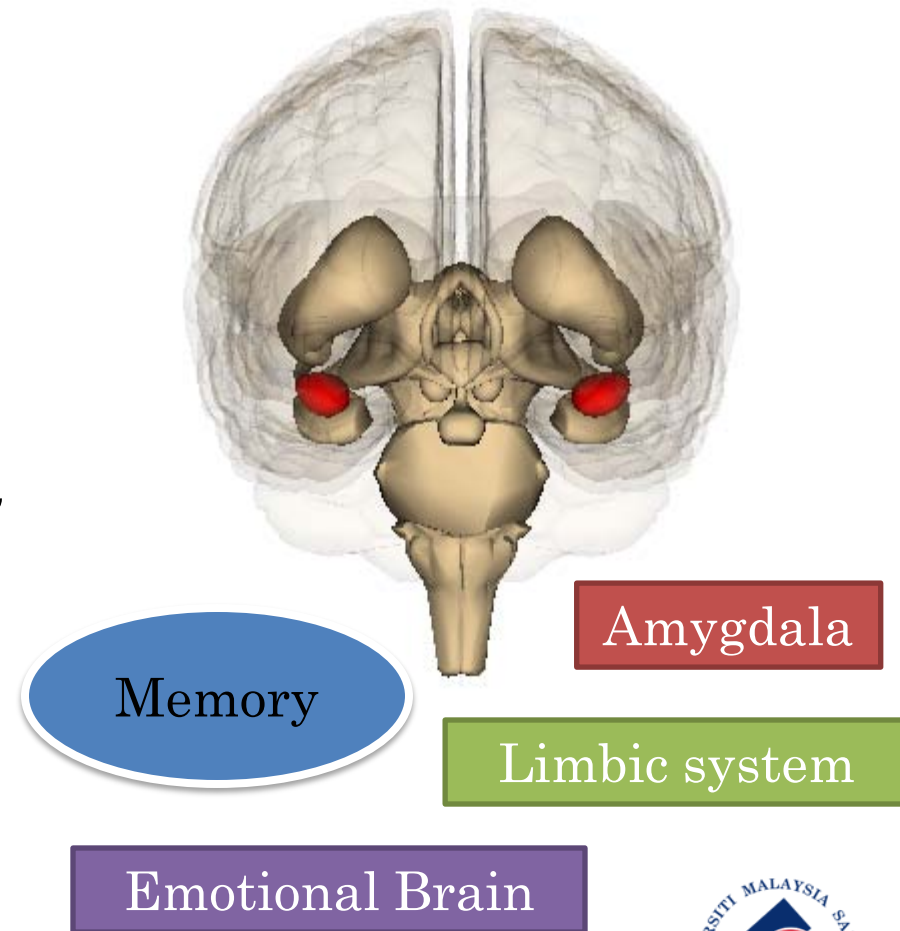
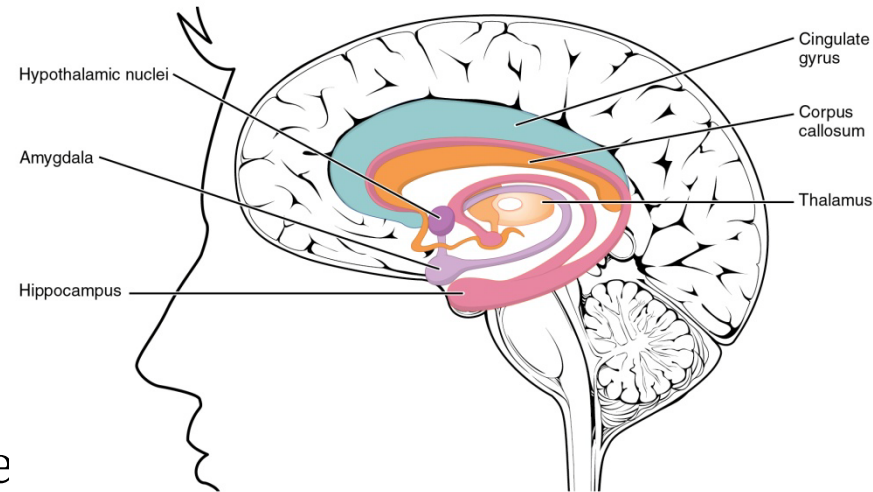


Image source:
http://en.wikipedia.org/wiki/Amygdalofugal_pathway

Emotion & the Brain

- The limbic system *interprets and directs* emotion and behavior.
- Activation of the *amygdala* correlates with greater retention of information.
 - Increased emotional arousal following a learning event influences the strength of the memory for the event.
- Emotion = ‘on-off switch to learning’.
 - Can encourage or disrupt thinking & learning.



Limbic System

Image Source:

http://upload.wikimedia.org/wikipedia/commons/7/7a/1511_The_Limbic_Lobe.jpg



Role of Emotions in Learning

- Appealing to the emotions is one of the keys to motivating people, attracting their attention and facilitating memory.
- Research shows that people who are in a positive emotional state will be:
 - open to a learning experience,
 - make more positive judgments, and
 - give more favorable feedback.
- Emotions influence ability to process information and to accurately understand what's encountered.



Role of Emotions in Learning

- Emotion is an **on/of switch for learning**...the emotional brain, the limbic system, has the power to open or close access to learning, memory, and the ability to make connections.
- Faced with frustration, despair, worry, sadness, or shame, kids **lose access** to their own memory, reasoning, and the capacity to make connections.



Disruptive Effects of Emotions

- If students are *overly excited* or *enthusiastic*, they might work carelessly or quickly rather than working methodically or carefully.
- In addition, emotions such as *anger*, *anxiety*, and *sadness* have the potential to distract students' learning efforts by **interfering** with their ability to attend to the tasks at hand.
- Students who are *depressed* or *anxious* about learning often do not feel competent academically.
 - withdraw from classroom activities in order to avoid appearing incompetent in the classroom.



Implications for Learning

- Create a positive, emotionally safe classroom environment to provide for the optimal learning of students.
 - Making learning joyful by incorporating games, music, drama, storytelling and simulations
 - Celebrating achievements with acknowledgements and fun
 - Modeling enthusiasm and passion and by guiding and mentoring students in supportive ways
- Creating a homey atmosphere, open communication, being fair, and looking for students' strengths.



Implications for Learning

- Develop ‘emotional intelligence’
 - Learning how to manage feelings and relationships constitutes a kind of “emotional intelligence” that enables people to be successful.



Your turn to talk...



Image source: <http://radovan.blogger.cz/o-lidech-trendy/IQ-a-EQ>

- Let us identify the types of emotions in the university/workplace at this time of the semester.
- Name a few.
- Do you agree with the previous statement “at best, IQ contributed about 20 percent to the factors that determine life success, which leaves 80 percent to other forces: forces grouped as *emotional intelligence*.”



Emotional Intelligence



Emotional Intelligence for a Successful Life



- ▶ By Peter Salovey and Jack Mayer (1990)
- ▶ Later popularised by Daniel Goleman



Savage Chickens

by Doug Savage



www.savagechickens.com

- ▶ What are emotions?
- ▶ Can emotions be intelligent?

Image Source: <http://www.stressmanagement-institut.de/HTML/4-galerie.html>

Image Source: <http://personalintelligence.info/about/message-from-mayer/>

Image Source: http://elmovimientoliterario.blogspot.com/2012_07_01_archive.html



What is Emotional Intelligence?

- All EI models share a common core of basic concepts:
 - Abilities to recognize and regulate emotions in ourselves and in others.



Emotional Intelligence?

- The capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships. (*Goleman, 1998*)
- Being able to monitor and regulate one's own and others' feelings, and to use feelings to guide thought and action. (*Peter Salovey and Jack Mayer, 1990*)
- All EI models share a common core of basic concepts:
 - Abilities to recognize and regulate emotions in ourselves and in others.



Qualities of EQ (Goleman, 1995)

- Knowing our emotions (**self-awareness**),
- Managing our emotions (**impulse control**),
- Motivating ourselves to achieve goals (**persistence**),
- Recognising emotions in others (**empathy**) and
- Managing relationships with others (**social skills**).



Self-Awareness

- **Knowing what we are feeling** in the moment, and using those preferences to guide our decision making; having a realistic assessment of our own abilities and a well-grounded sense of self-confidence.

Working with Emotional Intelligence (1998)
by Daniel Goleman



Self-Regulation

- Managing our emotions.
- **Handling our emotions** so that they facilitate rather than interfere with the task at hand; being conscientious and delaying gratification to pursue goals; recovering well from emotional distress.

Working with Emotional Intelligence (1998)
by Daniel Goleman



Self-Motivation

- Using our deepest preferences to move and **guide us toward our goals**, to help us take initiative and strive to improve, and to persevere in the face of setbacks and frustrations.

Working with Emotional Intelligence (1998)
by Daniel Goleman



Empathy

- **Sensing what other people are feeling**, being able to take their perspective, and cultivating rapport and attunement with a broad diversity of people.

Working with Emotional Intelligence (1998)
by Daniel Goleman



Social Skills

- Handling emotions in relationships well and accurately **reading social situations** and networks; **interacting smoothly**; using these skills to persuade and lead, **negotiate** and settle disputes, for cooperation and teamwork.

Working with Emotional Intelligence (1998)
by Daniel Goleman



How Can You Increase Your Emotional Intelligence?

- You can increase your emotional intelligence by:
 - Developing high self-awareness
 - Managing your emotions
 - Motivating yourself



Developing High Self-awareness

Savage Chickens

by Doug Savage



- ▶ Being aware of your feelings and behavior as well as others' perceptions of you.

Managing your Emotions

- **Recognize your emotions** and then **use them to solve the problem.**
- Starts with awareness.
- Ask “what if” questions to help determine how different reactions to the problem will work out.



Managing your Emotions

- **Develop constructive inner dialogues:**
 - Example: your coworker's not returning your files.
 - Manage anger: Automatic thoughts – “He never listens to me and so on”.



Motivating Yourself

- **Sources of motivation:**
 - Yourself (your thoughts, behaviors)
 - Supportive friends, family and colleagues
 - An emotional mentor (real / fictitious person)
 - Your environment (the air, light, sounds, and messages in your office)



What Does Research Say?

- Research during the last 25 years has consistently pointed to a set of competencies – some purely cognitive but **most emotional** – such as self-confidence, initiative, and teamwork as making a significant difference in the **performance** of individuals.

Cherniss, C. & Goleman, D. (2001). The Emotionally Intelligent Workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations.



- The role of leaders in every organisation is not to find fault or place blame, but to analyse why people are behaving as they are, and modify the consequences to promote the behavior they need.



Difference between IQ & EQ?

- How often have you met people who are seemingly brilliant in terms of IQ and yet who can't maintain relationships or who seem to be misfits?
- How often do we meet people who are just wonderful and building rapport or maintaining friendships, who are nowhere near as bright or clever in the academic sense?

EQ = one's ability to **feel**
IQ = one's ability to **think**

