



**“I FEEL WHAT YOU ARE FEELING”: NEURAL
PROCESSES FOR EMPATHY AND ITS IMPACT ON
ACADEMIC AND HOLISTIC ACHIEVEMENT**

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INSPIRATION

HOLISTIC ACHIEVEMENT

HOLISTIC WELL-BEING

RARELY WE SPEAK ABOUT EMPATHY
EXCEPT IN CERTAIN SUBJECTS LIKE
PSCD.

RARELY WE SPEAK ABOUT EMPATHY
AS A CROSS-CURRICULAR THEME.

HOPE OF RAISING MORE
AWARENESS ABOUT THE POWER OF
EMPATHY IN OUR CLASSROOMS.



AIM OF SESSION

1. Define empathy
2. The neural basis for empathy
3. 3 types of empathy
4. Empathy for academic and holistic achievement
5. Positive schooling and engagement and achievement
6. Suggestions to policy makers

EMPATHY

Empathy is a **broad** (Sharnay-Tsoory, 2011) and **complex** phenomenon (Lamm & Majdandzic, 2014).

Even though the term was **coined over one hundred years ago** (Cuff, Brown, Taylor & Howat, 2016), **authors gave it different interpretations** and thus this in itself (Decety & Jackson, 2004) **creates problems in the determination of what is actually being studied** and difficulty in the comparison of studies about empathy.



The origins of empathy date back to the 1880's when Theodore Lipps came up with the term "Einfühlung" (meaning, "attunement") to explain the "emotional appreciation of another's feelings" (Ioannidou & Konstantikaki, 2008, p.118).



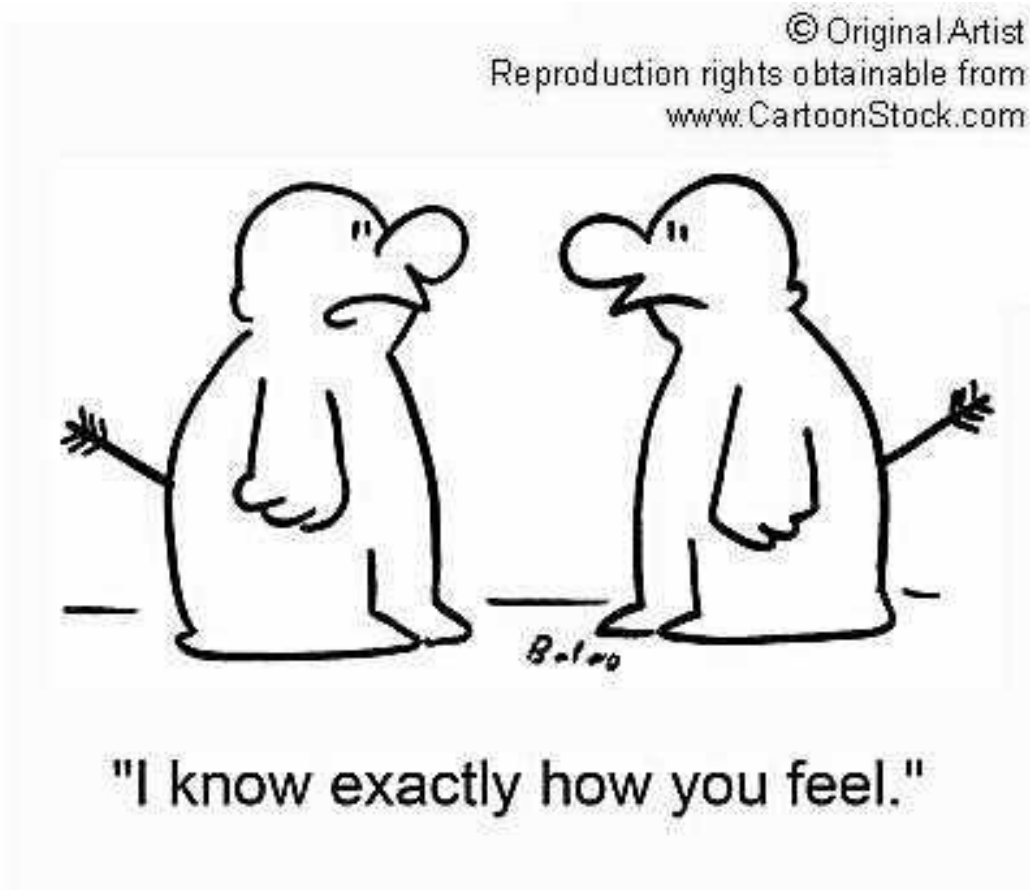
DEFINITION

In this paper, empathy is defined as **“the capacity to share and understand another’s ‘state of mind’ or emotion. It is often characterized as the ability to ‘put oneself into another’s shoes’, or in some way experience the outlook or emotions of another being within oneself”** (Ioannidou & Konstantikaki, 2008, p. 118).

EMPATHY AND SURVIVAL

Human ability to feel what others feel.

Humans use empathy to better address their social environment





Sunshine on
my skin

Empathy:
something you
can't see but
can FEEL

REFLECT

HOW DO YOU FEEL WHEN YOU LISTEN TO THE EXPERIENCE OF OTHERS?

IS IT EASIER TO UNDERSTAND THE EXPERIENCE OF OTHERS – WHICH YOU MIGHT HAVE EXPERIENCED IN THE PAST??

IS IT EASIER TO UNDERSTAND THE EXPERIENCE OF OTHERS- WHICH YOU NEVER EXPERIENCED?

WHY?

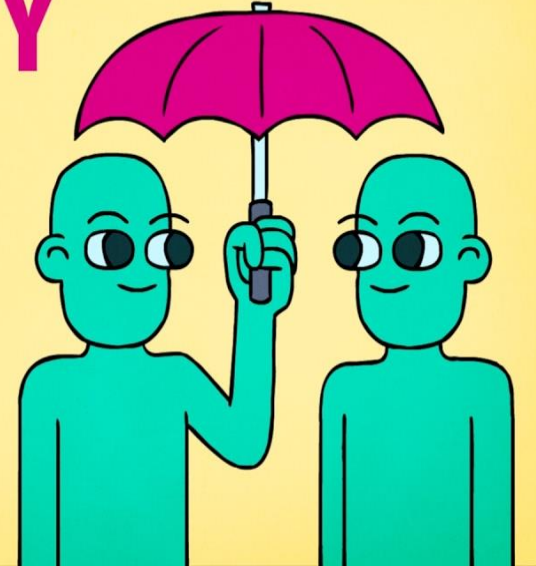
EMPATHY



WHY EMPATHY?

“Empathy plays a **critical interpersonal and societal role**, enabling **sharing of experiences, needs, and desires** between individuals and **providing an emotional bridge that promotes pro-social behaviour**” (Riess, 2017, p.74)

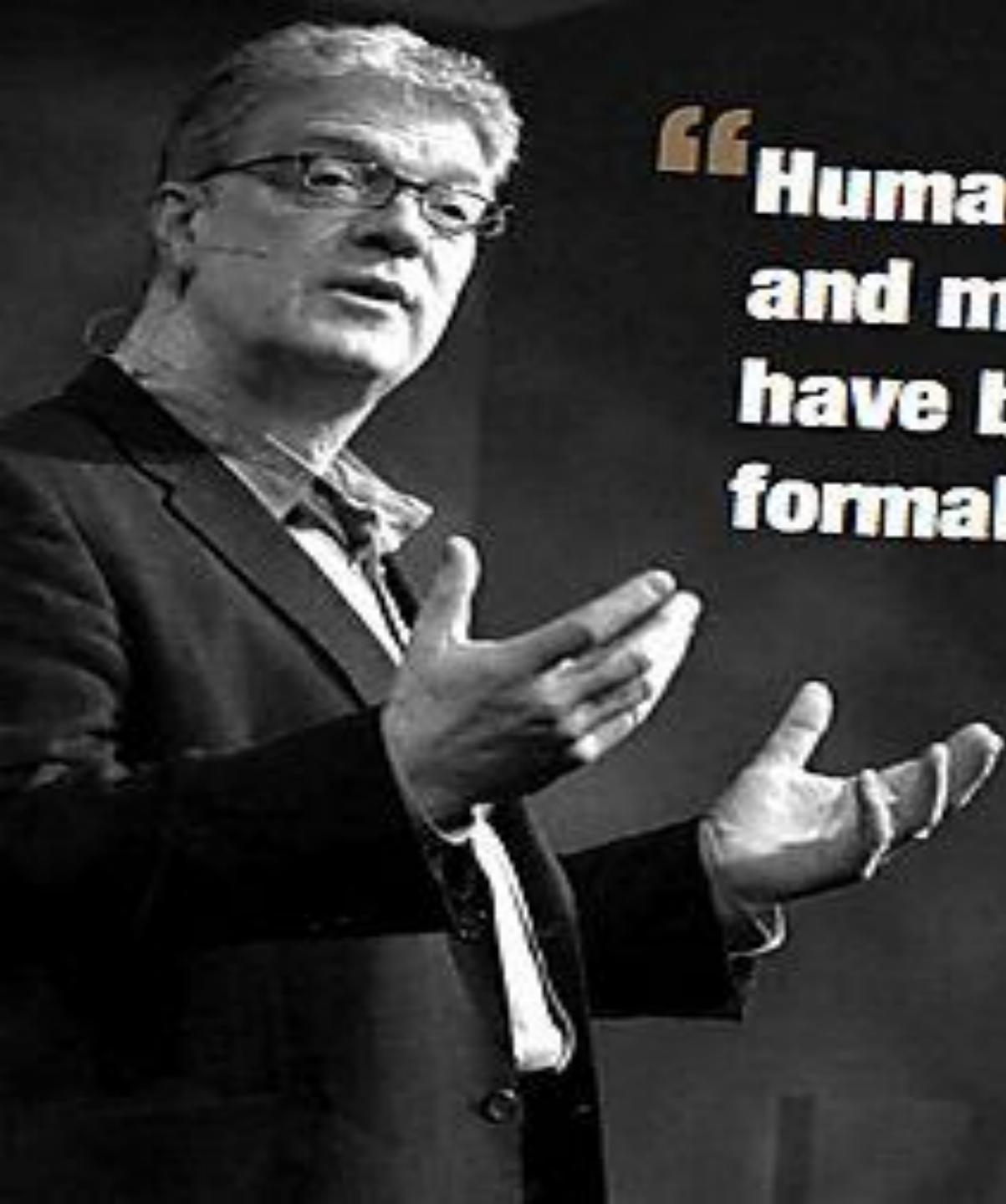
THE IMPORTANCE OF EMPATHY



“Educating the mind
without educating the heart
is no education at all.”

Aristotle





“Human intelligence is richer and more dynamic than we have been led to believe by formal academic education.”

Sir Ken Robinson

Out of Our Minds: Learning to be Creative

ANYBODY CAN BECOME **ANGRY**
THAT IS EASY
BUT TO BE ANGRY WITH
THE **RIGHT** PERSON
AND TO THE RIGHT DEGREE
AND AT THE RIGHT TIME
AND FOR THE RIGHT PURPOSE
AND IN THE RIGHT WAY
THAT IS NOT WITHIN
EVERYBODY'S POWER
AND IS **NOT EASY**

Aristotle

THE PSYCHOLOGICAL FRAMEWORK (GALLESE 2003)

Gallese (2003) presented empathy as having 3 levels.

Level 1 is the **phenomenological or the empathic level** - the sharing of common experiences, and hence the importance of interpersonal relationships to understand each other.

Level 2 is the **functional level** which is about **simulation routines that reflect the cognitive processes occurring in the brain during empathy.**

Level 3 is the **subpersonal level** which is **the result of mirror matching neural circuits.**

DIFFERENT TYPES OF EMPATHY

COGNITIVE EMPATHY

AFFECTIVE EMPATHY

COMPASSIONATE
EMPATHY



"It helps me empathize."

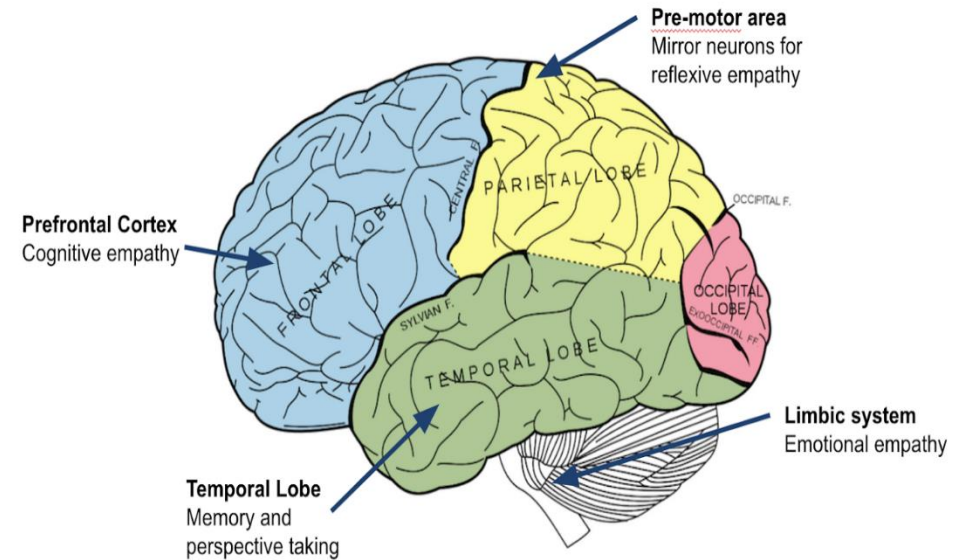
COGNITIVE EMPATHY VERSUS EMOTIONAL EMPATHY

COGNITIVE EMPATHY - the understanding of the perspective of the other

EMOTIONAL EMPATHY - the sensation of another's feelings and the sharing of the emotional experience (Baron-Cohen & Wheelwright, 2004).

NEURAL PROCESSES FOR COGNITIVE EMPATHY

For **cognitive empathy**,
the ventromedial prefrontal
cortex,
temporoparietal junction and
the medial temporal lobe are
involved
(Sharnay-Tsoory, 2011).



Lawrence et al. (2004) and Sharnay-Tsoory (2011) considered cognitive empathy as close to the **Theory of Mind**.

This is an important social-cognitive skill where **individuals are able to understand the mental states of others** (Hopper, 2019).

Ratka (2018) related **cognitive empathy to perspective taking** which is **the idea of putting oneself in the shoes of others**.

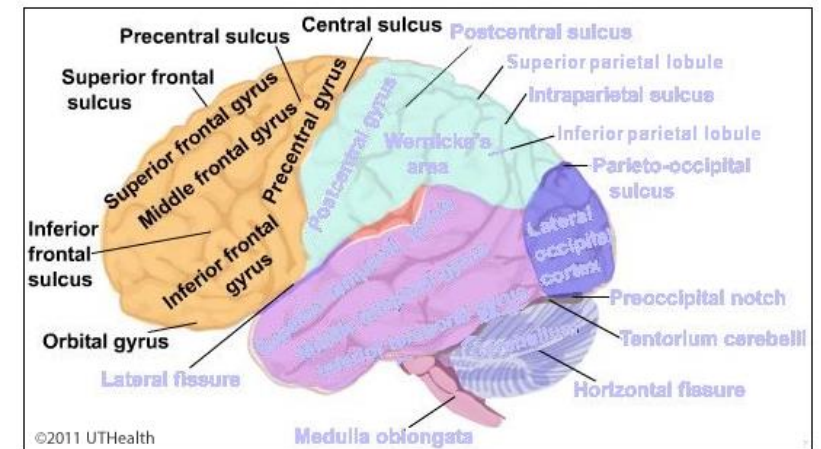
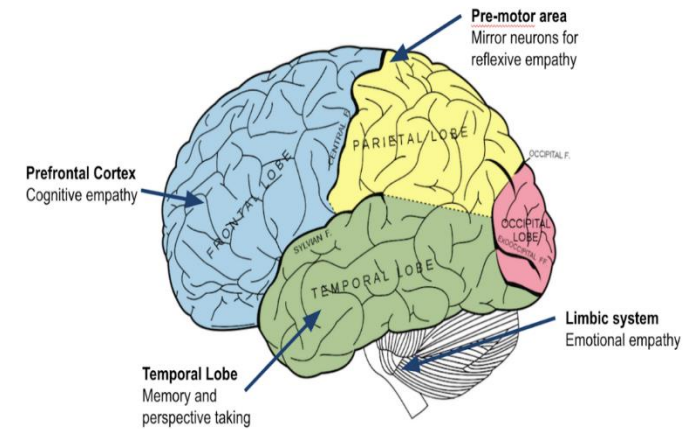


CAN EVERYONE ENGAGE IN COGNITIVE EMPATHY?

1. **Psychiatric disorders are linked with a deficiency in empathy -** These are: alexithymia, autistic spectrum disorders, psychopathy/antisocial personality disorders and borderline and narcissistic personality disorders (Decety & Moriguchi, 2007).
2. Recent evidence suggested that **individuals with Autism Spectrum Disorder (ASD) show a difficulty in cognitive empathy** (Mazza et al., 2014).

NEURAL PROCESSES FOR EMOTIONAL EMPATHY

For **emotional empathy**,
the inferior frontal gyrus and
the inferior parietal lobe are involved
(Baron-Cohen & Wheelwright, 2004)



EMOTION CONTAGION

Emotional or affective empathy is **“the subjective mirroring of others' feeling states”** (Powell & Roberts, 2017, p.138).

Lim et al. (2020) - **the automatic adoption of a person's emotional state by another person** (Loewenstein, Rick, & Cohen, 2008).

Lim et al. (2020) presented the example that newborn infants tend to cry when they hear others who are crying.

MIRROR NEURONS



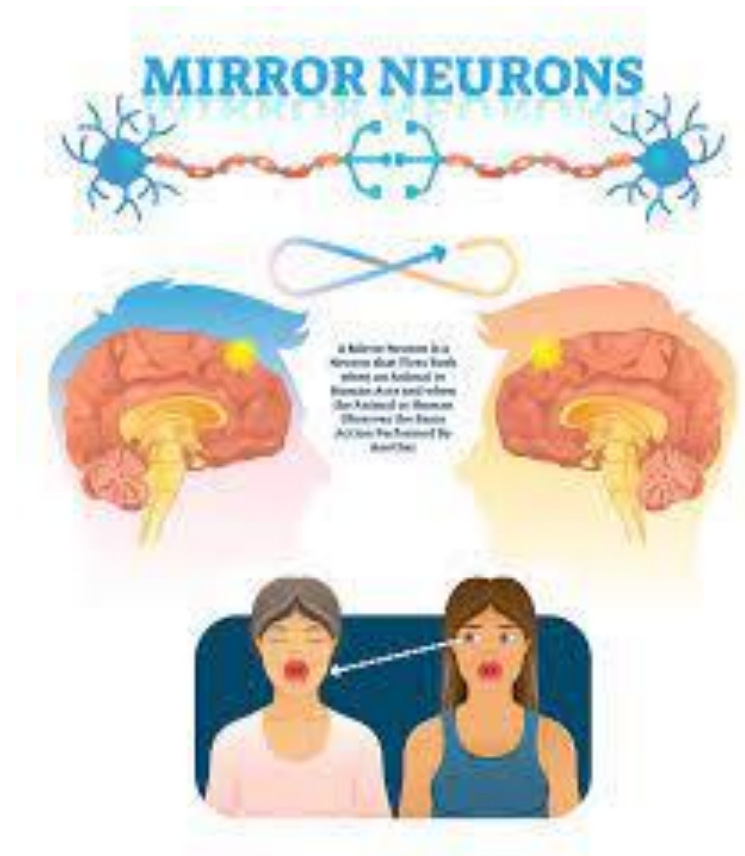
Brain cells that react both
when a particular action
is performed and when it is only observed.

“The neural basis for empathy may be a system of mirror neurons”

MIRROR NEURONS

Di Pellegrino et al. (1992), Gallese (2003, 2007) and Rizzolatti, Fabbri-Destro and Cattaneo (2009) explained that mirror neurons were found in the ventral premotor cortex of monkeys and discharged when monkeys executed an action as well as when they observed another monkey performing that action.

Even though, different authors stated that these neurons are the reason why individuals empathise, they also said that there is lack of direct empirical support (Lamm & Majdandžić, 2015; Redshaw, 2019; Davis et al., 2021).



COMPASSIONATE EMPATHY

Powell and Roberts (2017) explained that in this type of empathy **“we want to help the other person deal with his situation and his emotions”** (p. 138).

Compassionate empathy is the feeling of sympathy and compassion for others (Powell & Roberts, 2017) and the warmth, concern for other and compassion generated through positive vicarious emotions (Lazarus 1999).

THE ROLE OF EMPATHY IN ACADEMIC ACHIEVEMENT

“In the last 20 years, ... research in neuroscience, in personal and social values development, and in artificial intelligence, seems to be reaffirming the significance of the role of emotions in learning and development” (Cooper, 2011, p. 13).

Researchers in literature associated **positive affect, including empathy, with creativity, problem-solving (Fredrickson, 2013) and academic achievement (Ben-Eliyahu & Linnenbrink-Garcia, 2013).**

THE ROLE OF EMPATHY IN ACADEMIC ACHIEVEMENT

Corinne A. Seeds University Elementary School in Los Angeles.

Feshbach and Feshbach (1987) found a positive correlation between empathy and academic achievement.

RESULTS-

“these developmental relations between empathy and cognitive functioning suggest that empathy may be conceived of as a coping skill that the young girl uses in adapting to the school environment” (Feschbach & Feschbach, 1987, p. 1346).

The researchers also stated that empathy can enhance perspective and role taking, thus helping in reading and in other cognitive tasks like the comprehension of important events. They concluded by saying that this affects the students’ academic achievement.

THE ROLE OF EMPATHY IN ACADEMIC ACHIEVEMENT

Durlak et al. (2011) did a meta-analysis of 213 school based universal SEL (social and emotional learning) programs.

They showed that programs that focused on the emotions of the students, including empathy, contributed to an improvement in student attitudes, a decrease in emotional distress, a decrease in problematic behaviour and an improvement in academic performance.

THE ROLE OF EMPATHY IN ACADEMIC ACHIEVEMENT

Grigoropoulos (2019) aimed to study how the development of empathy in the classroom enhances student achievement.

This was carried out with middle school teachers in ACS Athens who participated in focus groups, interviews and completed a questionnaire.

Results indicated that **educators who believed in the power of empathy** used in class, **positively impacted the students' sense of safety and security**. They found out that this led to **the willingness of the students to open up for learning and the acquisition of knowledge**. At the same time, the interviewed teachers stated that they **require training in the facilitation of empathetic practices**.

CONTESTING OR CHALLENGING THE POSSIBILITY OF TEACHING EMPATHY

Empathy is innate rather than learnt (Davis, 1990; Stein, 1970; Zahn-Waxler, Robinson & Emde, 1992).

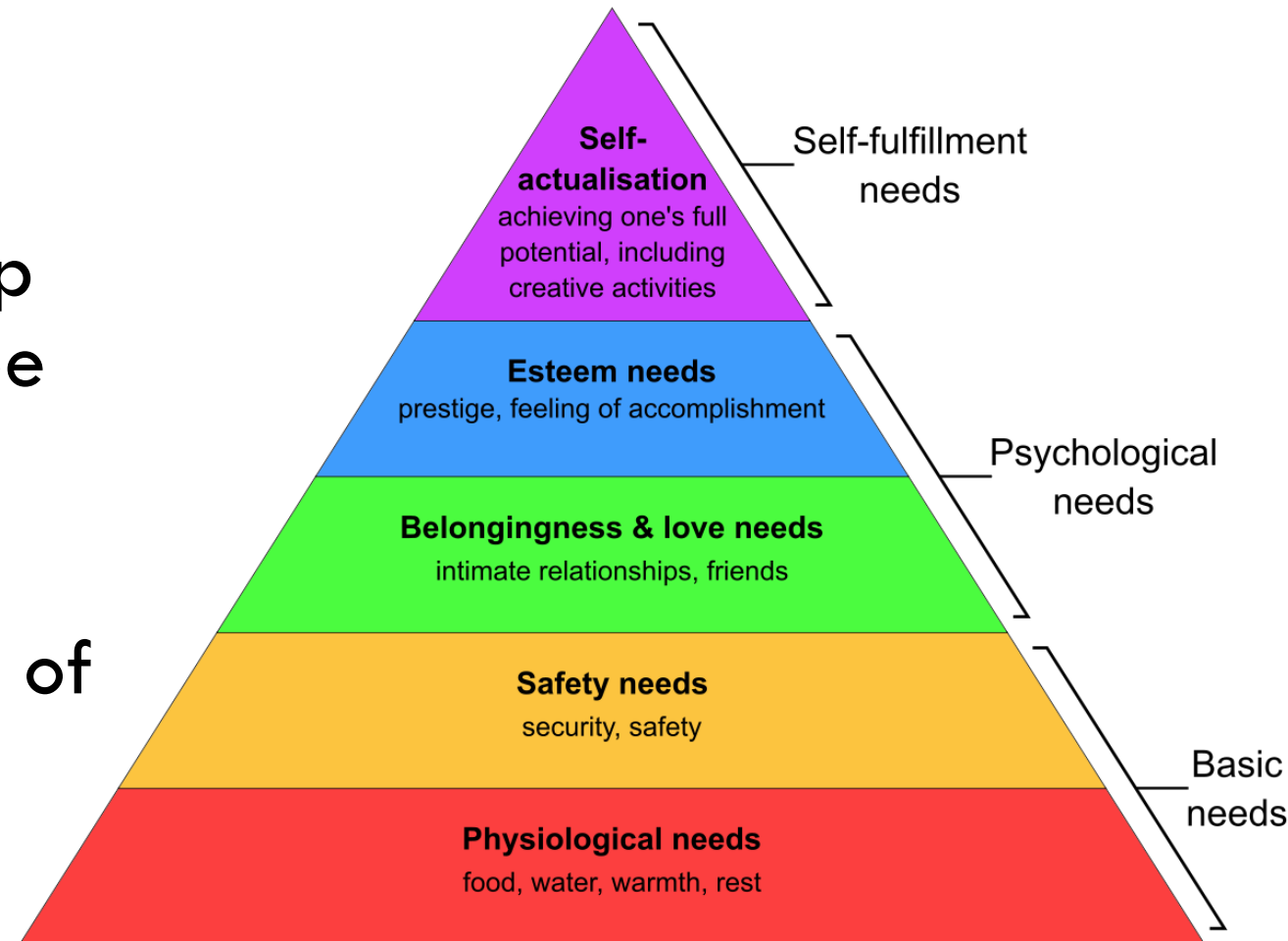
Duncan et al. (2007) analysed six longitudinal studies and concluded that socio emotional abilities like empathy did not predict academic achievement in the future.

Carl Rogers shifted the view of empathy from a skill which is taught to a way of being. Rogers (1959, 1961) stated that if a person has a surrounding environment that is based on unconditional positive regard and active listening, empathy can take place. As a result, it is the environment which enhances empathy.

EMPATHY FOR HOLISTIC ACHIEVEMENT AND WELL-BEING

The term 'holistic' originates from 'holon' which is a Greek word that refers to a universe that is made up of integrated wholes that cannot be easily fragmented into parts (Lee, 1988).

This is closely linked to the concept of self-actualisation.



EMPATHY FOR HOLISTIC WELL-BEING

COGNITIVE EMPATHY

AFFECTIVE EMPATHY

COMPASSIONATE EMPATHY



TEACHING EMPATHY

Cooper (2011) explained how **affective education and empathy are included in character and person-centred education** in the US.

In the UK, students have the subject **PSHE** (Personal, Social, Health and Economic Education).

In Malta, we have the subject **Personal, Social and Career Development (PSCD)** which is provided to all students from primary till secondary schooling (7 till 16 years).

In Malta, there are also specific learning programs in the **Learning Zone and the Nurture Group**.

WHAT DO YOU DO, AND WHY, WHEN:

A student refuses to read aloud?

A student has not submitted his homework?

A student is not participating?

A student looks very tired or distracted?





OUR EDUCATION?

Do we educate or school our children?

Do we have time to address empathy with our classes and our students?

How can we promote empathy?

What about the syllabi? Learning Outcomes? Curriculum?

What satisfies us most in our work?

What has been the happiest and the saddest day in your professional work?

WHAT IS COMMON IN THESE?



POSITIVE SCHOOLING

Positive schools consider the **strengths of the students as unique**, encourage **healthy teacher and peer relationships** and emphasize **student involvement**.

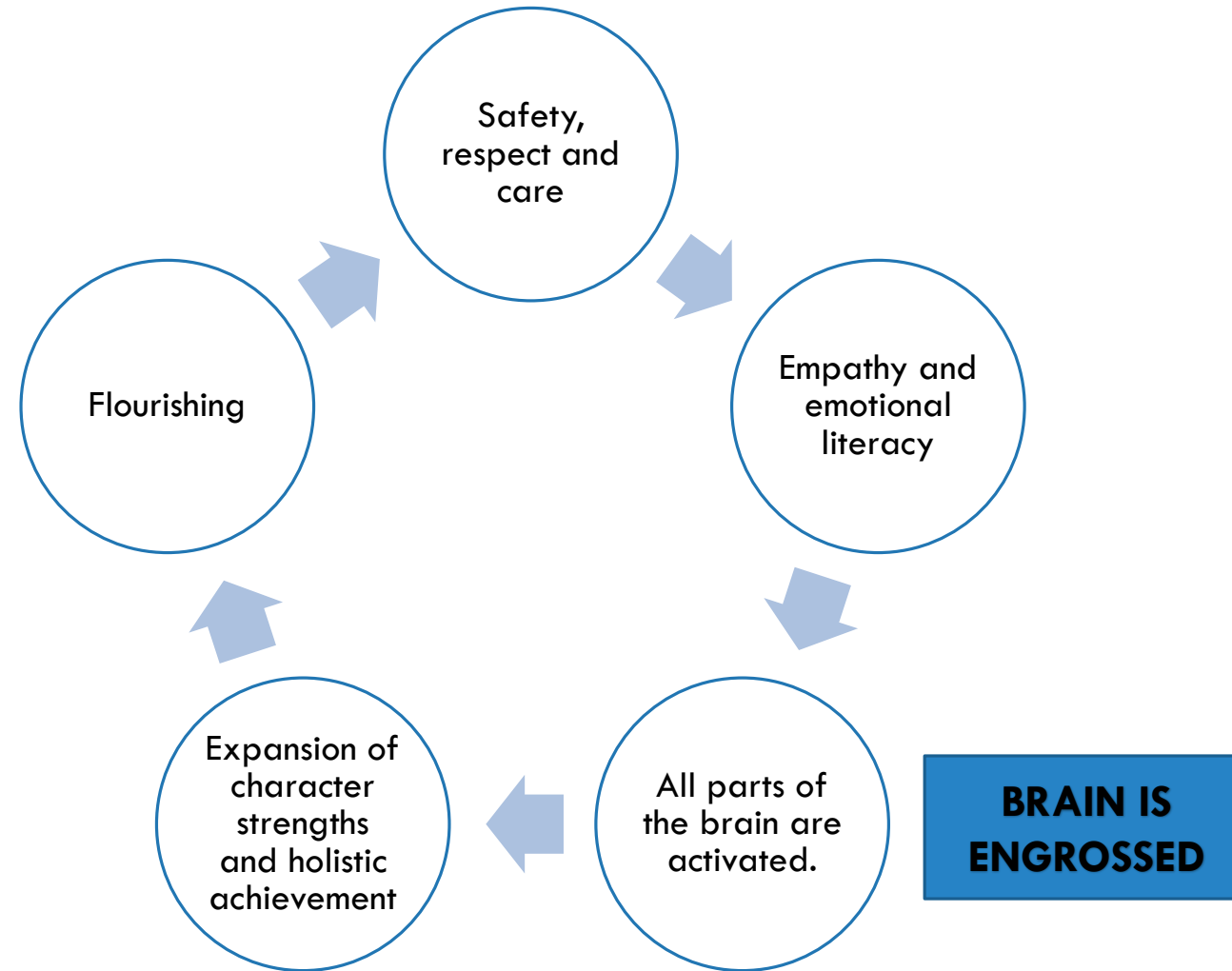


BRAIN BECOMES MORE ENGROSSED

Through a positive multisensory experience, based on empathy, the brain and the body absorb the feedback and information around them and become more engaged and engrossed in the experience (Noddings, 1986), so there is more understanding of the occurrences around them.



POSITIVE SCHOOLING





POSITIVE EDUCATION

Circle format

Experiential learning

Person centered education

Safe environment

CLASS FORMATION

Equality

Connection

Encourages participation by everyone

Gives all the same opportunity to express themselves

Inhibits dominant view of the few



minimizes behaviour

THE EDUCATOR WHO USES EMPATHY OR ENCOURAGES EMPATHY:

Models expected behaviour

Emphasizes the need for respect and tolerance for all

Creates and sustains positive interpersonal relationships

Facilitates learning and not transmits knowledge

Make good use of probing and open ended questions

Addresses conflicts and assists pupils in finding ways to resolve ways inherent in working together

Shows or expresses empathy

Self discloses when necessary

Uses immediacy to focus on something that anyone shares

Challenges pre-conceived ideas or beliefs

Acknowledges all contributions

EMPATHY AND THE SCHOOL REALITY

The school culture and environment

Over emphasis on the academic rather than the personal and social

Too much emphasis on examinations

Lack of professionals' and parents' awareness

Lack of professionals' and parents' competencies

The national culture

Safety and lack of confidence

Lack of reflective practice





Thank
you