



Harnessing science dynamics to transform learning



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Expert Meeting on the Learning Sciences, UNESCO Paris, 25-26 October 2023

Session 3. Insights from the Learning Sciences

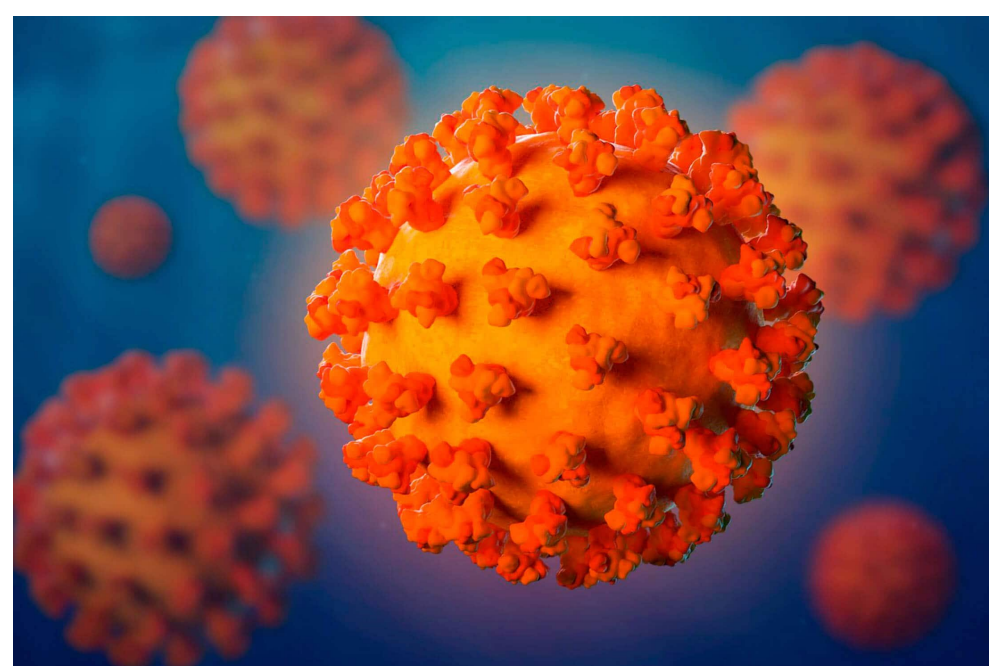
A Latin American and inter-bodily contribution to global socio- emotional education

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Educación /

WHY PROMOTE SOCIAL-EMOTIONAL SKILLS IN THE CLASSROOM AND TO BE SUCCESSFUL IN LIFE?



OUTLINE

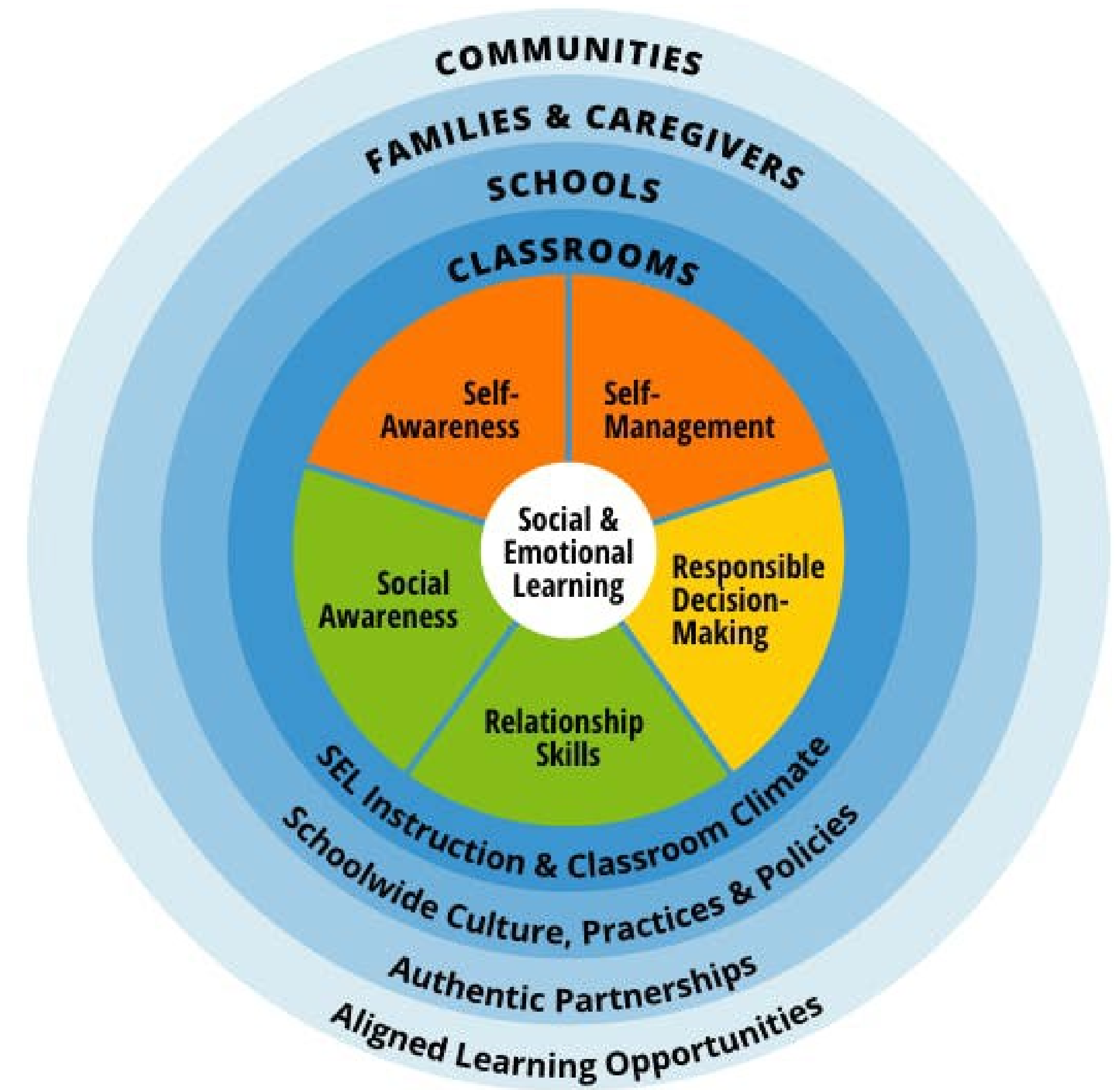
- Socioemotional learning in schools and education policies (CASEL)
- Affective turn in education
- Latin America sociocultural perspective
- “Inter-bodily Empathy Project”
- Open-ended questions

THE SOCIAL AND EMOTIONAL LEARNING (CASEL)

“An integral part of education and human development.

Is the process to **develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.**

SEL advances educational equity through authentic school-family-community partnerships to establish learning environments and experiences that feature trusting and collaborative relationships, **rigorous and meaningful curriculum and instruction, and ongoing evaluation.**”



CASEL POLICIES

They engage policymakers and promote legislation at the federal level to advance evidence-based SEL policies that support local efforts.

American Rescue Plan (ARP), Every Student Succeeds Act (ESSA), and SEL in workforce policies.

To take a critical stance on the fact that emotions are superficial, and that objectivity and truth are the desired goals for the study of the social learning.



“ We need to address inequities in education and we need better pathways to success... [which requires recognizing that students’ social and emotional learning] is just as important as their academic growth. ”

Miguel Cardona
US Secretary of Education

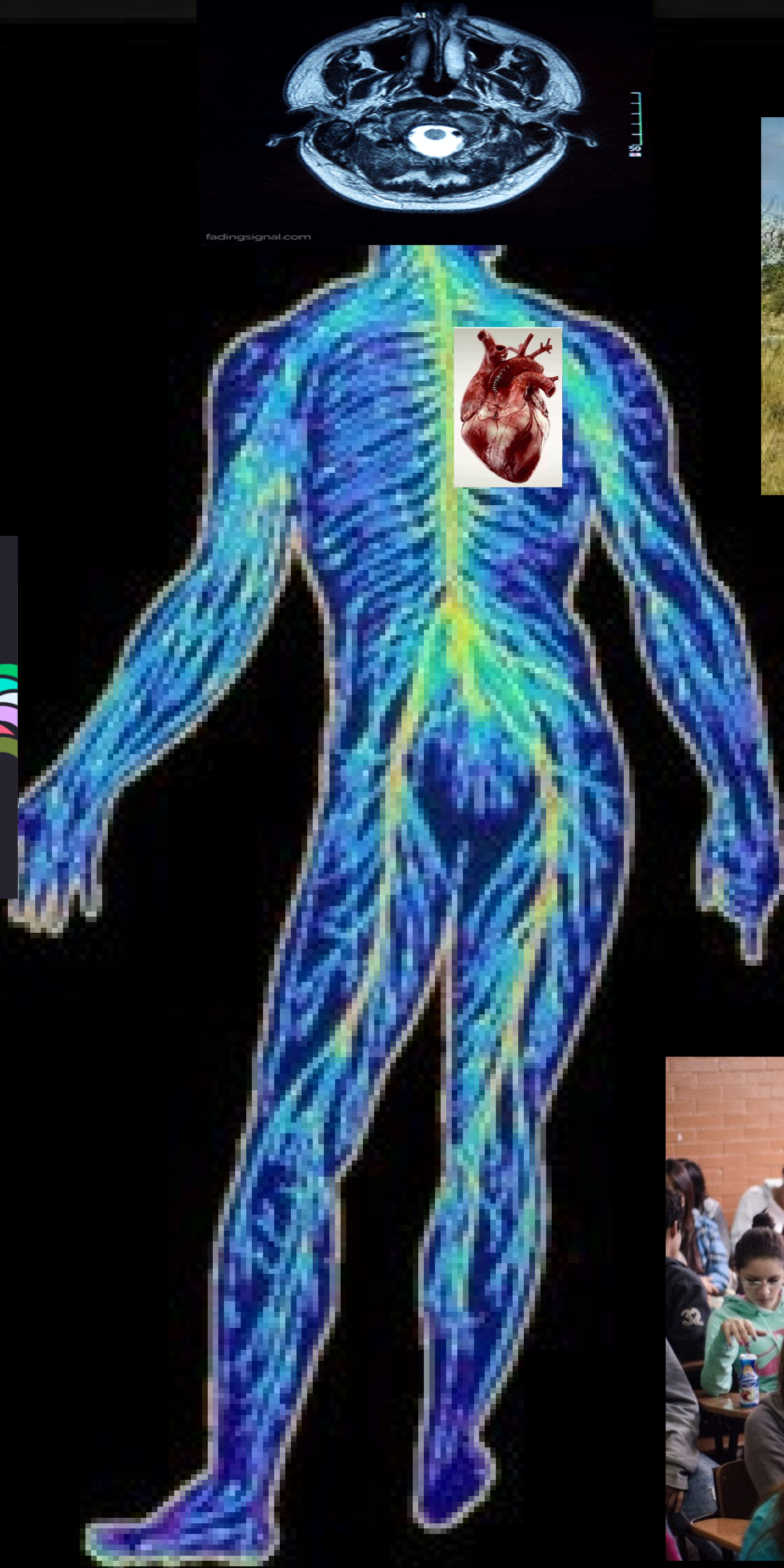
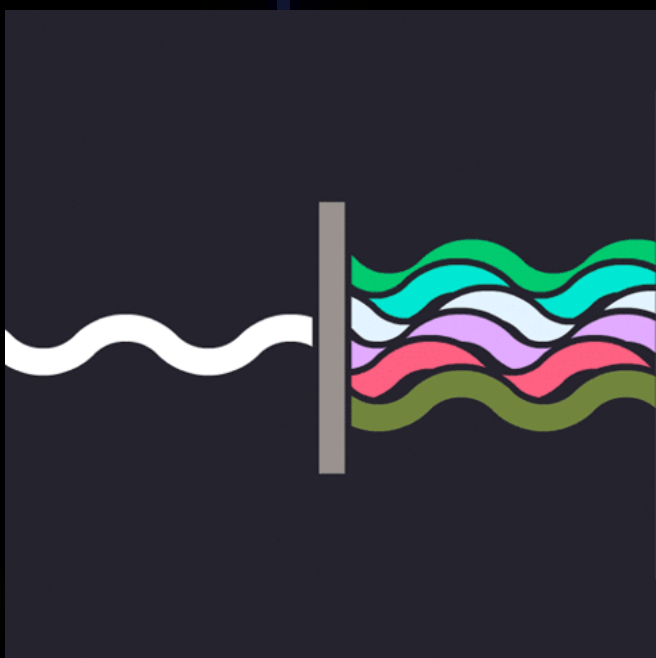
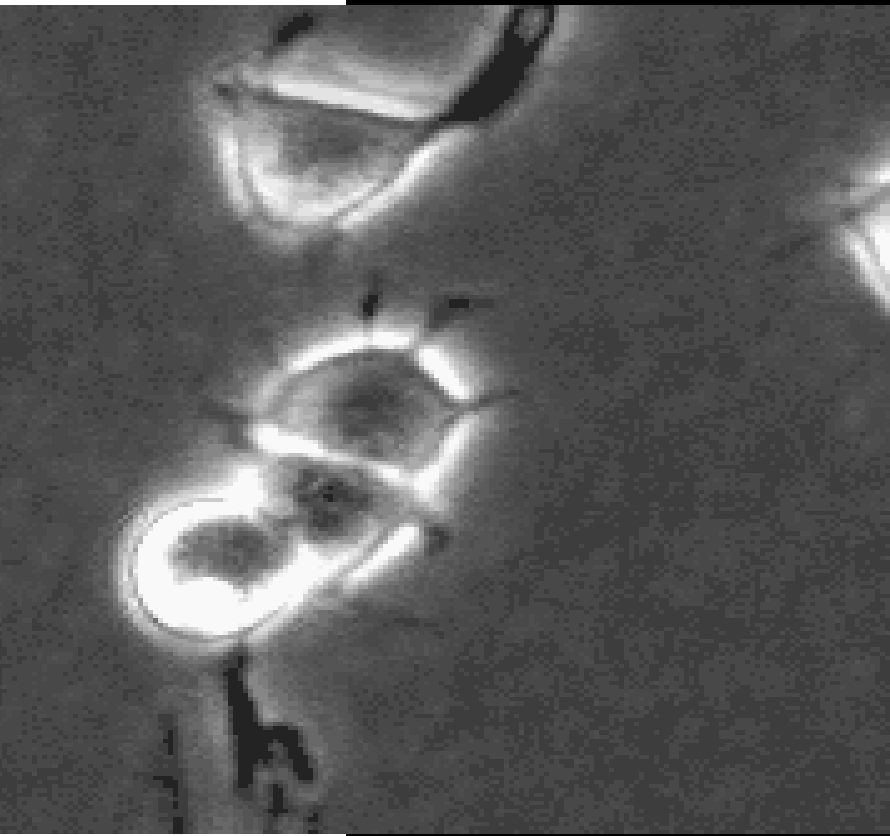
AFFECTIVE TURN IN LATIN AMERICA EDUCATION

- Critical Pedagogy (Freire)
- Embodied Cognition and Situated and Relational Education (Maturana y Varela)
- Intercultural, feminist, antiracist, and postcolonial Pedagogies (Schmelkes, Moreno)
- Culture of peace and global citizenship (González-Grandón, Perales, López)
- Pedagogy of discomfort (Boler, Zembylas)



AFFECTIVE TURN IN LATIN AMERICA EDUCATION (2)

- Inter and transdisciplinary dialogue for problem solving and social transformation.
- It recognizes not only the intellectual and cognitive focus of education but also its embodied, affective, situated and political dimensions.
- To support the development of active and critical student-citizens
- It is oriented toward education policies as a means of change for social justice
- To question the myth of neutral curricula



SOCIOCULTURAL EMPATHY

Social transformation might actually happen as a result of the empathetic experiences cultivated through critical pedagogy

Empathy involves a complex and ongoing set of practices and processes of confrontation, conflict, negotiation and attunement, they are not only premised on care, concern, and sympathy towards the other; rather it is also a mode of affective perspective-taking (Pedwell 2016)

Felt shame or “negative emotions” can play a constructive role in sensitizing us to affective transformation what brought shame upon us in the first place (Tarnopolsky 2010).

Powerful pedagogical tool able to produce action, because teachers and students can utilize their discomfort to construct new emotional understandings into ways of living with others.

Its empirical grounding in conflict and post-conflict settings

EMOTIONAL COMMUNITIES

Contextual perspective

Barbara Rosenwein (2006) to inquire about the emotional norms internalized and shared by groups and that guide the way of thinking and acting with respect to life events.

Rules of feeling: Arlie Hochschild (1979)

“Dignified rage”



“ACUERPAR”

"I name as **acuerpamiento** or **acuerpar** the personal and collective action of our bodies outraged by the injustices experienced by other bodies. The gathering generates affective and spiritual energies and breaks down borders and imposed time. It provides us with closeness, collective indignation but also revitalization and new strength, to recover joy without losing indignation".

Lorena Cabnal 2015



EMBODIED INTERAFFECTIVITY AND INTER-CORPOREAL RESONANCE

It conceives emotions not as brain states within individuals but as encompassing spatial phenomena that connect the embodied subject and the situation with its affective possibilities in a circular interaction.

In every face-to-face encounter, the partners's subject-bodies are intertwined in a process of bodily resonance, coordinated interaction and mutual incorporation.



Interbodily and inter affective system



“This creates a circular interplay of expressions and reactions running in split seconds and constantly modifying each partner’s bodily state, in a process that becomes highly autonomous and is not controlled by the partners. They have become parts of a dynamic sensorimotor and inter-affective system that connects both bodies by reciprocal movements and reactions, that means, by inter-bodily resonance”

Fuchs, T. (2017). Intercorporeality and interaffectivity. *Intercorporeality: Emerging socialities in interaction*, 3-23.

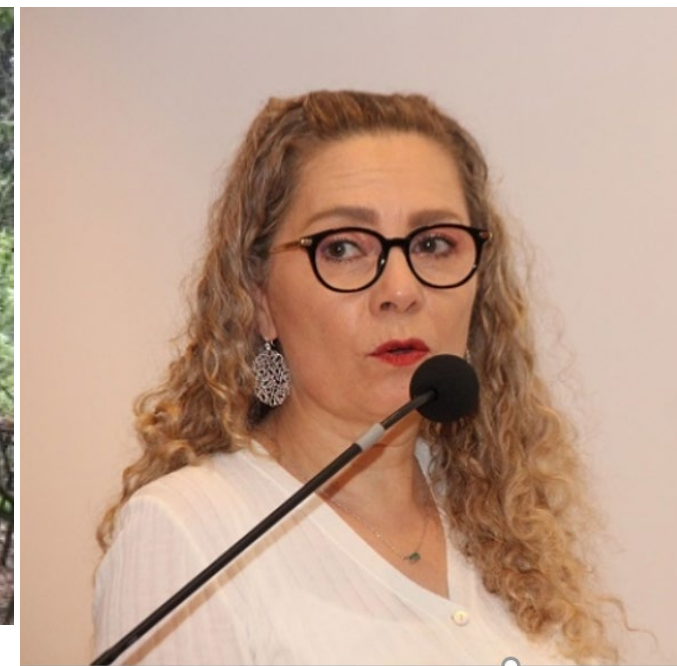
González-Grandón, Ximena. 2023. “Coordinando los afectos: experiencias empáticas cuerpo a cuerpo”. *Trabajo Social* 25 (1): 55-82. Bogotá.



EMPATHY INTER-BODILY PROYECT

- Educational space that offers didactic resources and conceptual frameworks on three thematic axes (sociocultural empathy, inter-bodily strategies and curricula, culture of peace and education policies).
- Aims to help strengthen in the curricula the sociocultural and affective skills necessary to understand and transform the world in which we live, using transdisciplinary research.
- Methodology: The embodied and affective dimensions of experiential learning that draws on student and teacher testimony, and on objective neurophysiological measurements.
- To generate state and global policy in creating conditions that support the implementation of social-affective and inter-bodily emotional learning so **all** students can benefit.
- Comes from the embodied concerns and realities of life, maintaining a politically aware and critically engaged position towards injustice, oppression, insecurity, and solidarity
- Intervention conducted in Mexico's higher education on teachers' and students' subjective affectivity and learning behaviors.

OUR TEAM



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Citlali Flores Bobadilla
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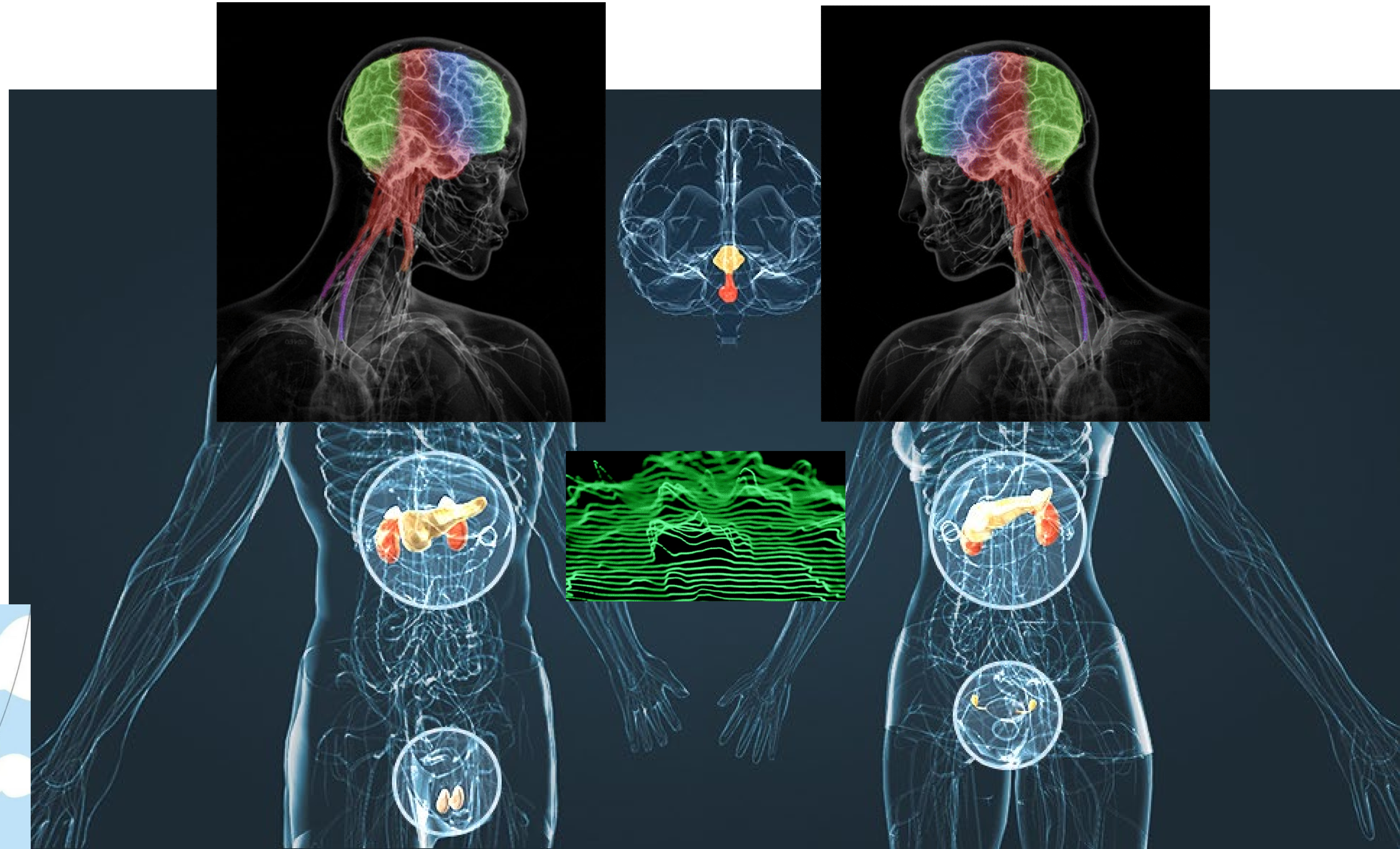
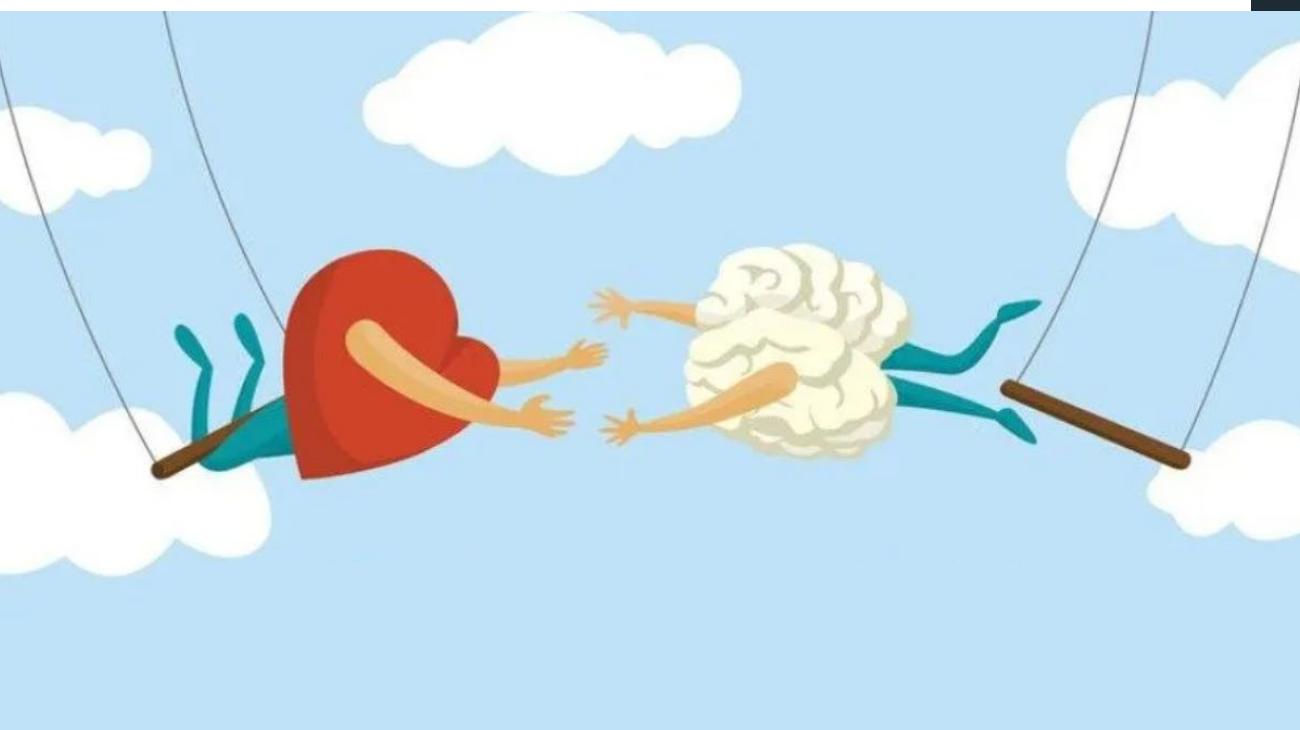
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Renata Velarde
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Daniela Vélez



TEACHER-STUDENT RELATIONSHIP

Which means that both, lecturers and students need to feel the tension or affective resonance, to reevaluate and reflect on their worldviews

To both developing listening, communication, and conflict-based skills.



LAB: EXPERIMENTAL CLASSROOM



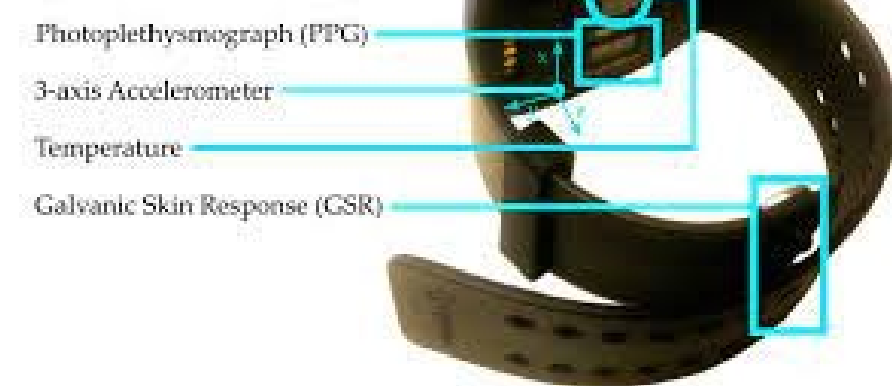


PHYSIOLOGICAL VARIABLES OF INTEREST (ANS)


- Electrodermal activity (EDA), skin conductance or galvanic skin response
- Heart Rate Variability



E4 Sensors:



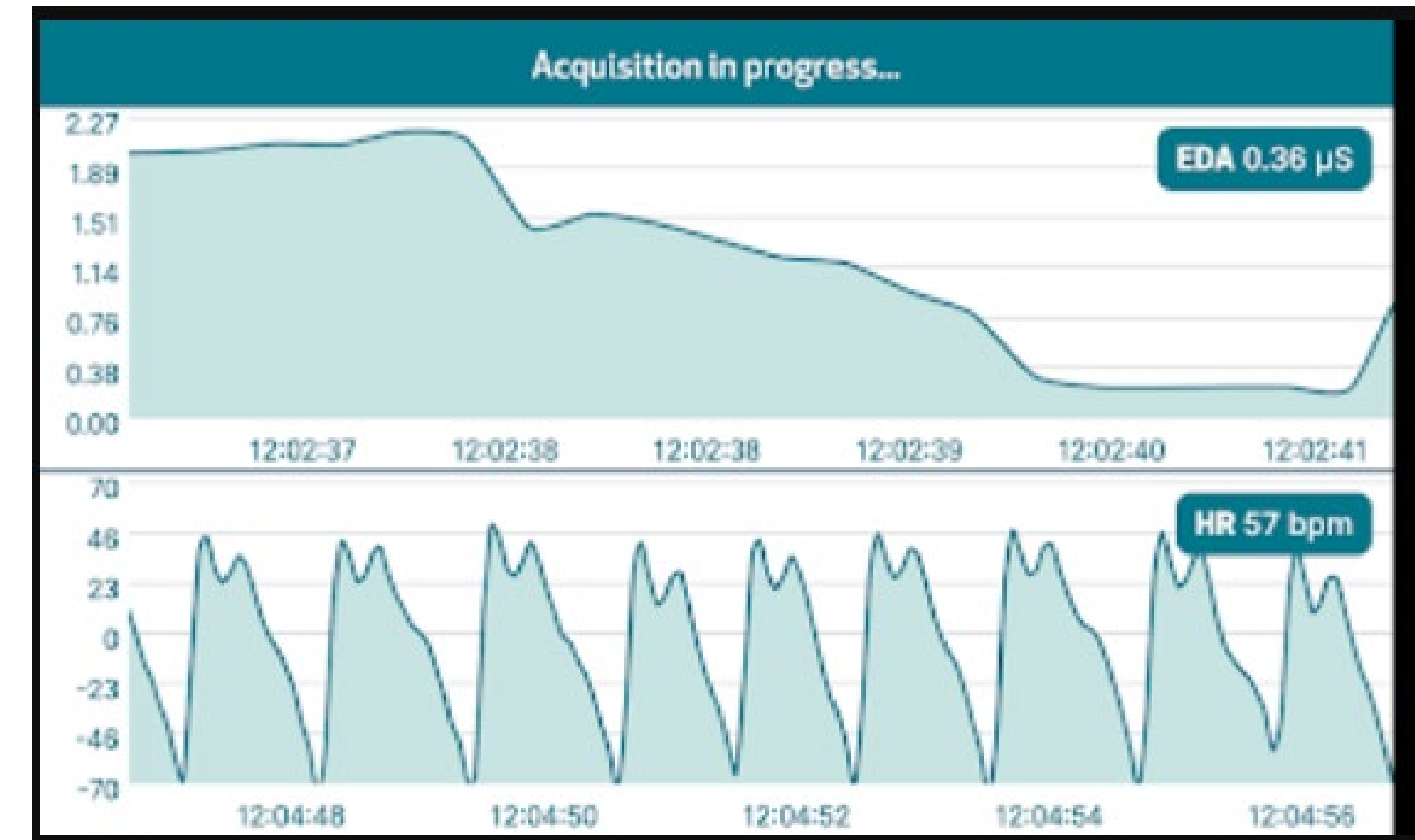
E4 Sensors



- PPG Sensor**
Photoplethysmography Sensor - Measures Blood Volume Pulse (BVP), from which heart rate, heart rate variability (HRV), and other cardiovascular features may be derived
- 3-axis Accelerometer**
Captures motion-based activity
- Event Mark Button**
Tags events and correlate them with physiological signals
- EDA Sensor (GSR Sensor)**
Electrodermal Activity Sensor - Used to measure sympathetic nervous system arousal and to derive features related to stress, engagement, and excitement.
- Infrared Thermopile**
Reads peripheral skin temperature
- Internal Real-Time Clock**
Temporal resolution up to 0.2 seconds in streaming mode

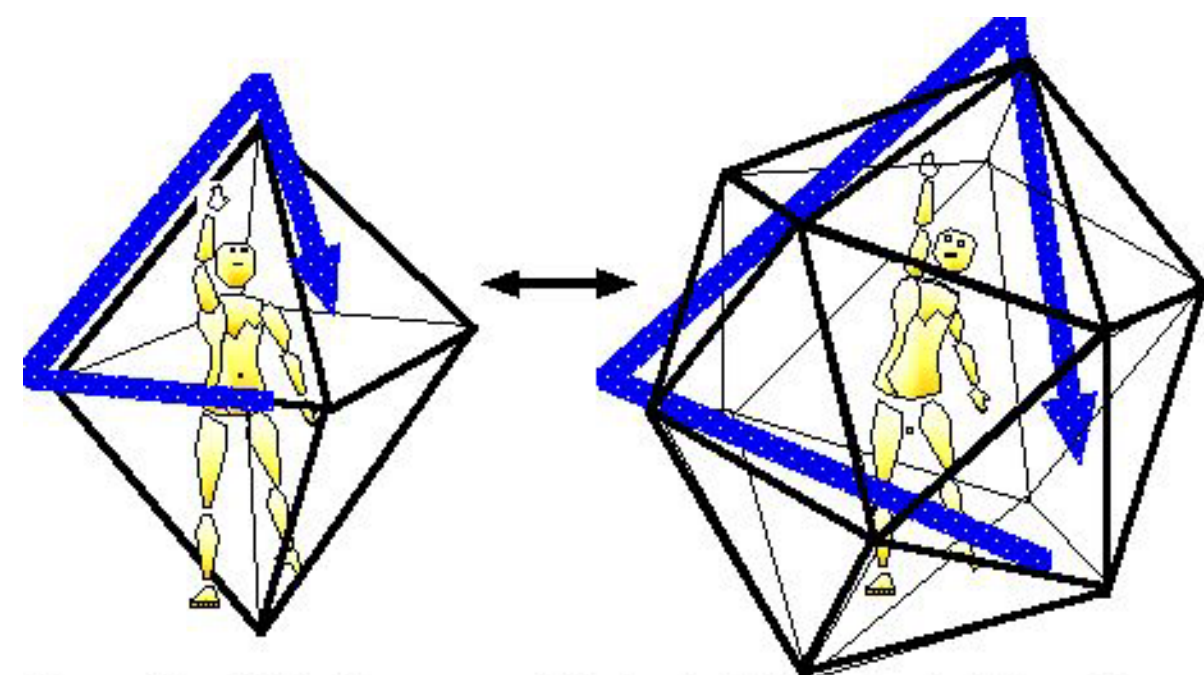
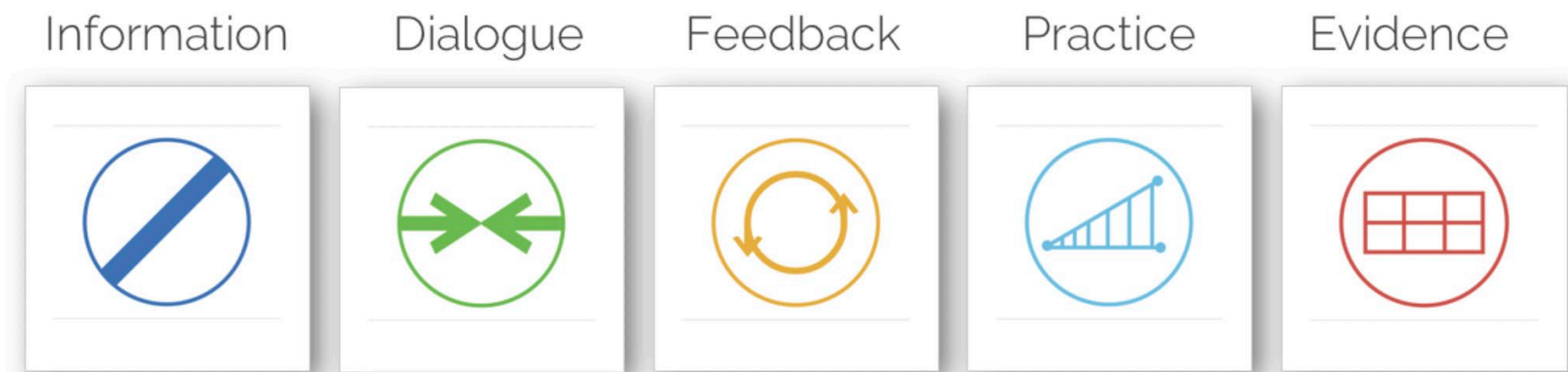


PHYSIOLOGICAL RESPONSES WITH QUANTIFIABLE RANGES OF EMPATHIC SOCIOAFFECTIVITY.



Preliminary Results show how strategic narratives, postures, gestures, tone of voice, and exchange of bodily affections, at least in some context of conflict, can function as a valuable pedagogical tool that enables the formation of new affective communities with shared ethics, and positive learning behaviors among the participants.

EMPATHICA (E4), ECOLOGICAL OBSERVATION AND TESTIMONY



Three-Ring Deflecting across Octahedral & Icosahedral Kinespheres
(2000) J.S. Longstaff

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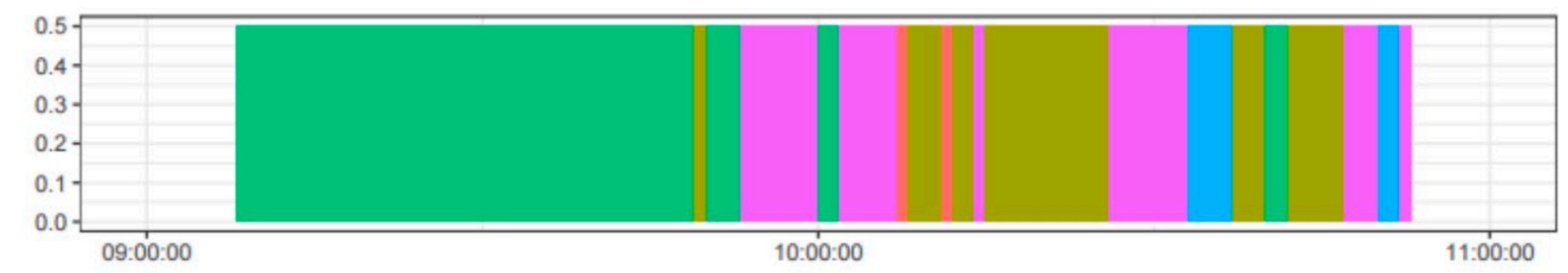
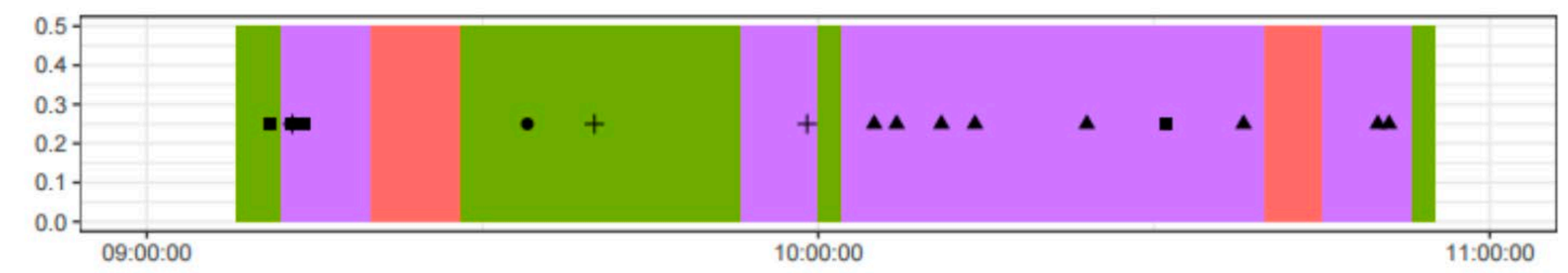
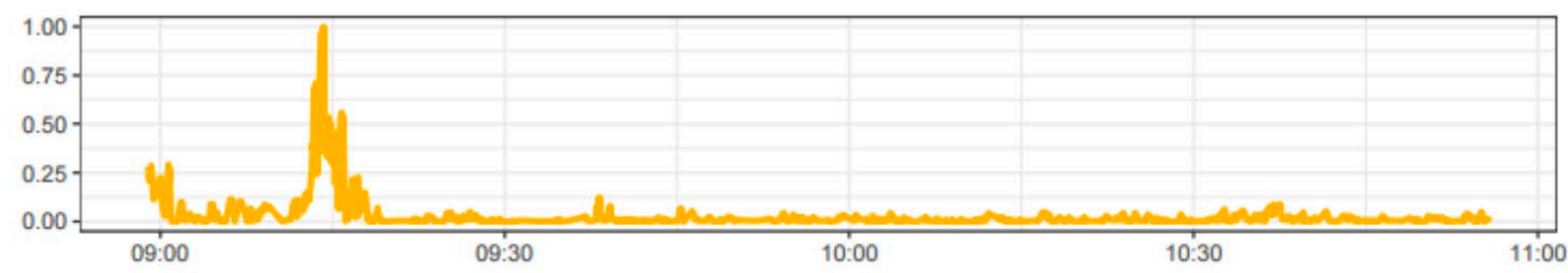
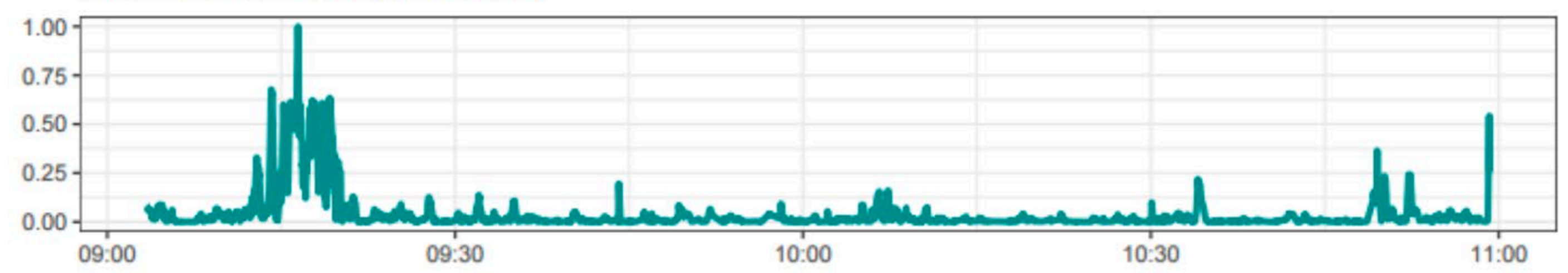
Registro Verónica Aguilar

ESTADO GRUPAL (categorías LEM modificadas)

	A	B	C	D	E	F	G	H	I	J	K	L
1	ESTADO GRUPAL (categorías LEM modificadas)											
2	Rapport	Plática casual, saludos y despedidas informales (e.g. selfies, aplausos) entre el docente y los alumnos que promueven una atmósfera afectiva										
3	Información	El docente hablan o transmite información en su clase, los estudiantes ponen atención al docente o la pantalla										
4	Exposición	El o la estudiante, solo(a) o en grupo, expone un tema y el resto de la clase atiende.										
5	Diálogo	Comunicación horizontal o discusión entre todo el grupo										
6	Retroalimenta	Guía u orientación del docente sobre el desempeño grupal										
7	Práctica	Los estudiantes desarrollan una actividad establecida por el docente o ellos mismos										
8	Evidencia	Los estudiantes integran lo aprendido en un producto final (como un debate, un póster, un portafolio, etc.)										
9	Pausa	Un descanso breve durante la clase										
10	Reflexión	El grupo monitorea activamente lo aprendido a partir de una iniciativa del docente (e.g. "qué nos podemos llevar de todo esto" "A qué conclusión llegamos con esto")										
11	Aplauso	El grupo aplaude (estado breve)										
12												
13	ESTADO DOI DEFINICION											
14	Exposición_e	El profesor utiliza una experiencia propia o ajena como recurso pedagógico										
15	Exposición_te	El profesor expone un tema, usando o no medios audiovisuales, pero claramente dentro de la fase informativa de la clase										
16	sin_interaccio	Sin hablar, sin atender a otro(s) estudiantes										

<https://accionyreaccion.org/2021/04/29/la-ciencia-de-danzar-consciencia-corporal/?fbclid=IwAR3S3RttY8or0hJUdmFhPP-bdHRTbvCgcN-bdq76hmuVsNyJlqDiqOyZ0tc>

Clase 24-mar Docente Cristina



estado_grupal

- Diálogo
- Información
- Pausa
- Práctica

interacción

- interaccion_afirmar_cabeza
- ▲ interaccion_corporea
- interaccion_humor
- + interaccion_replica

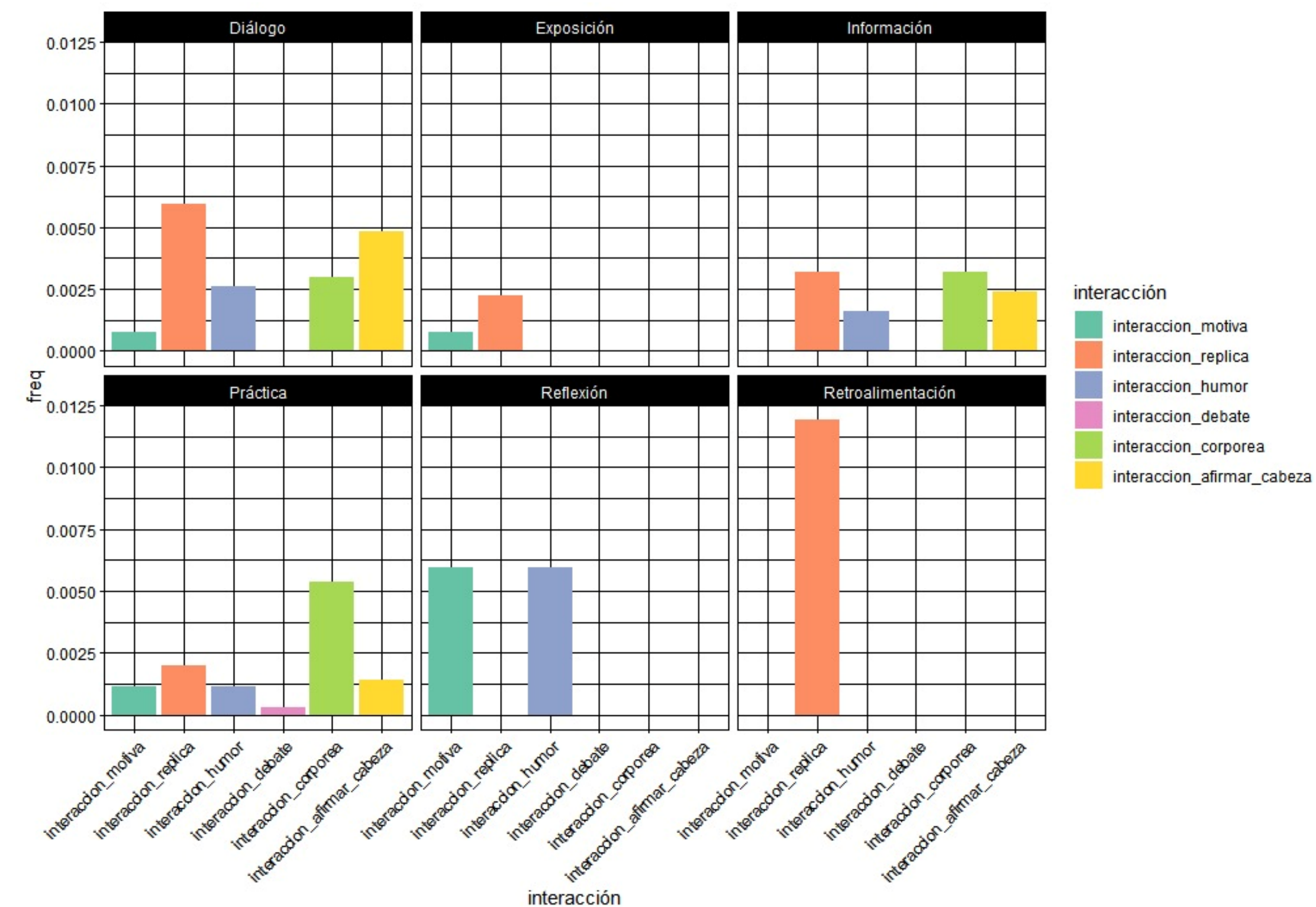
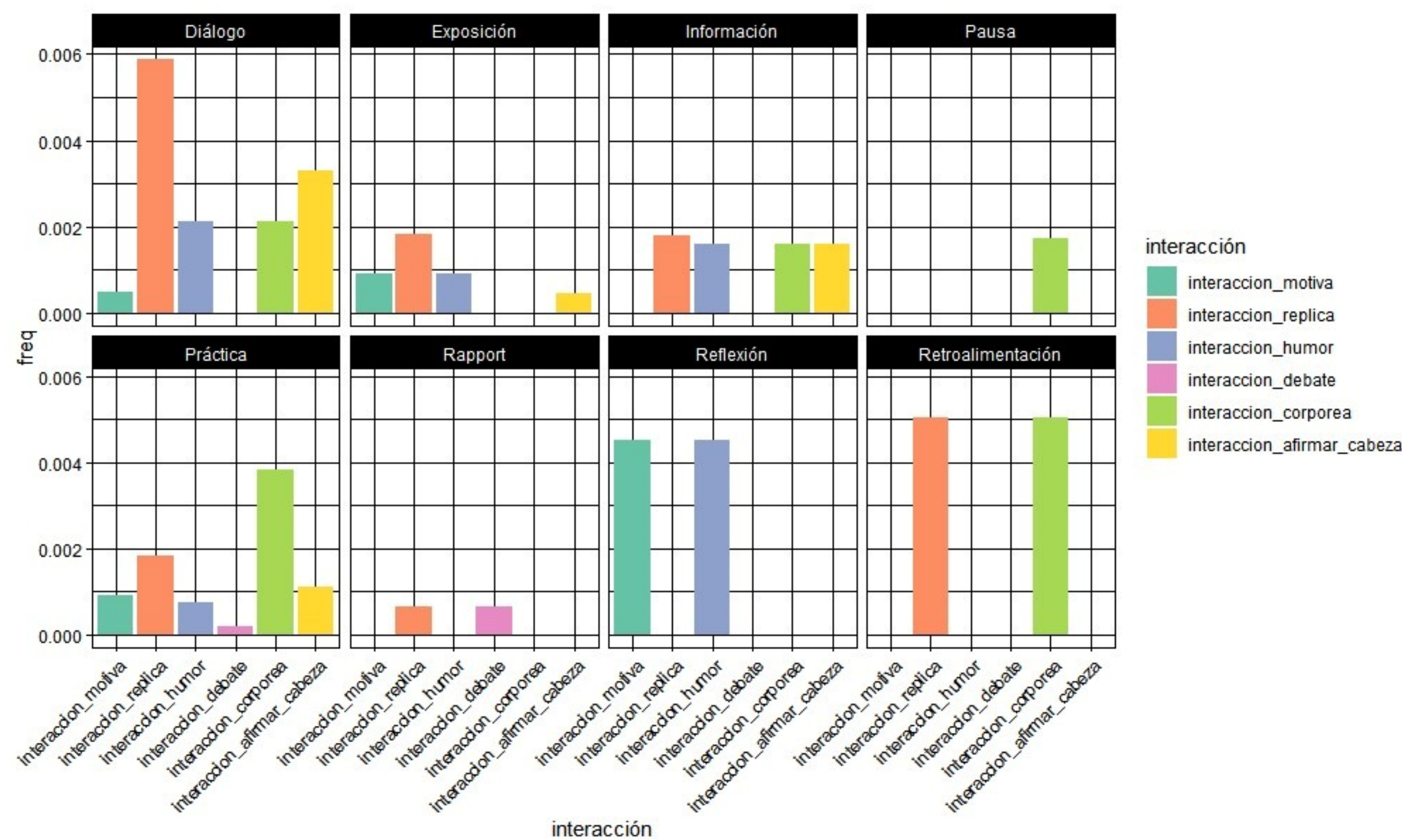
estado_docente

- interaccion_estudiante_focal
- interacción_estudiante_otro
- interaccion_grupo
- interaccion_subgrupo
- sin_interaccion

estado_estudiante

- atencion_estudiante
- atencion_grupo
- atencion_objeto
- atencion_profesor
- interaccion_estudiante

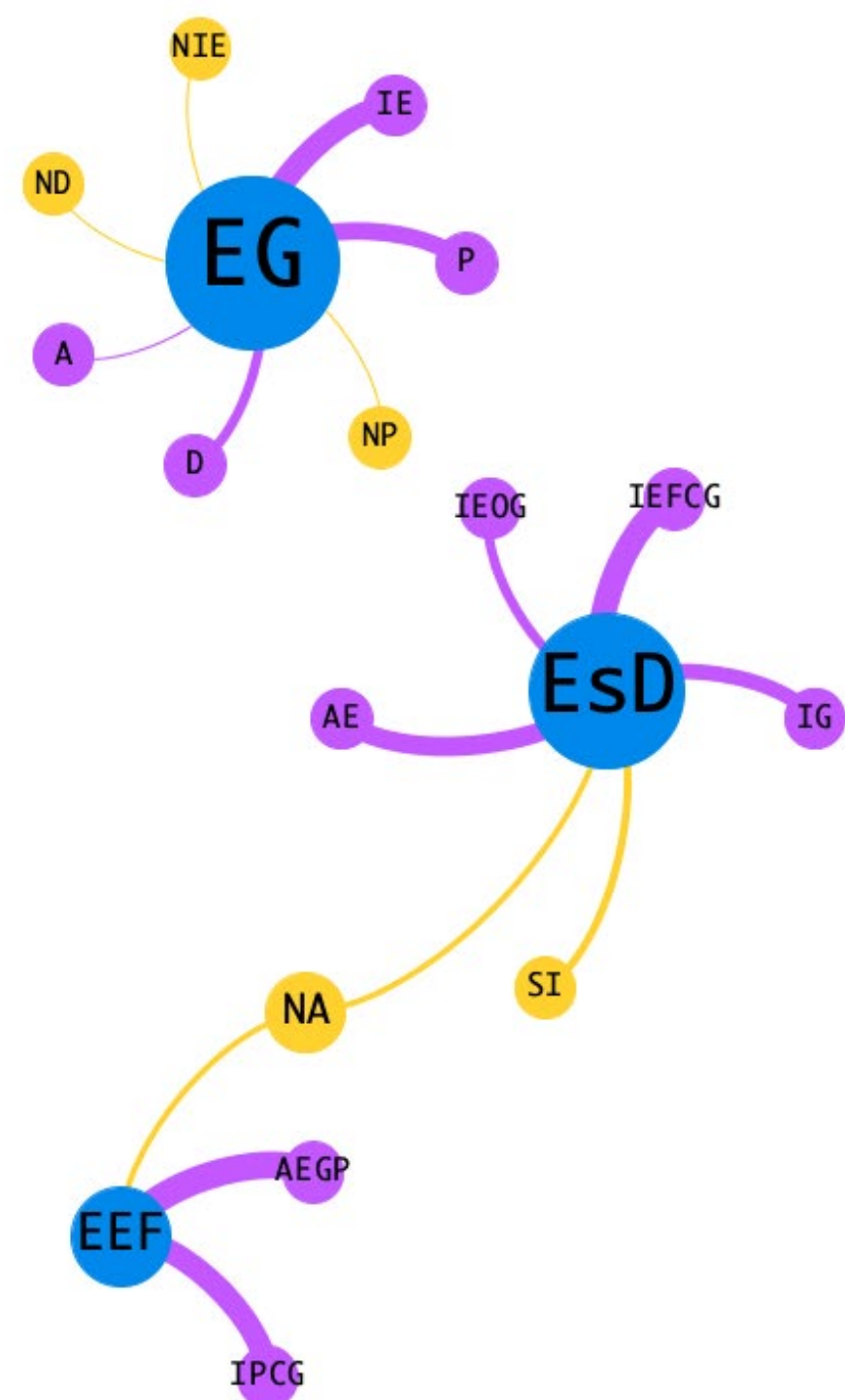
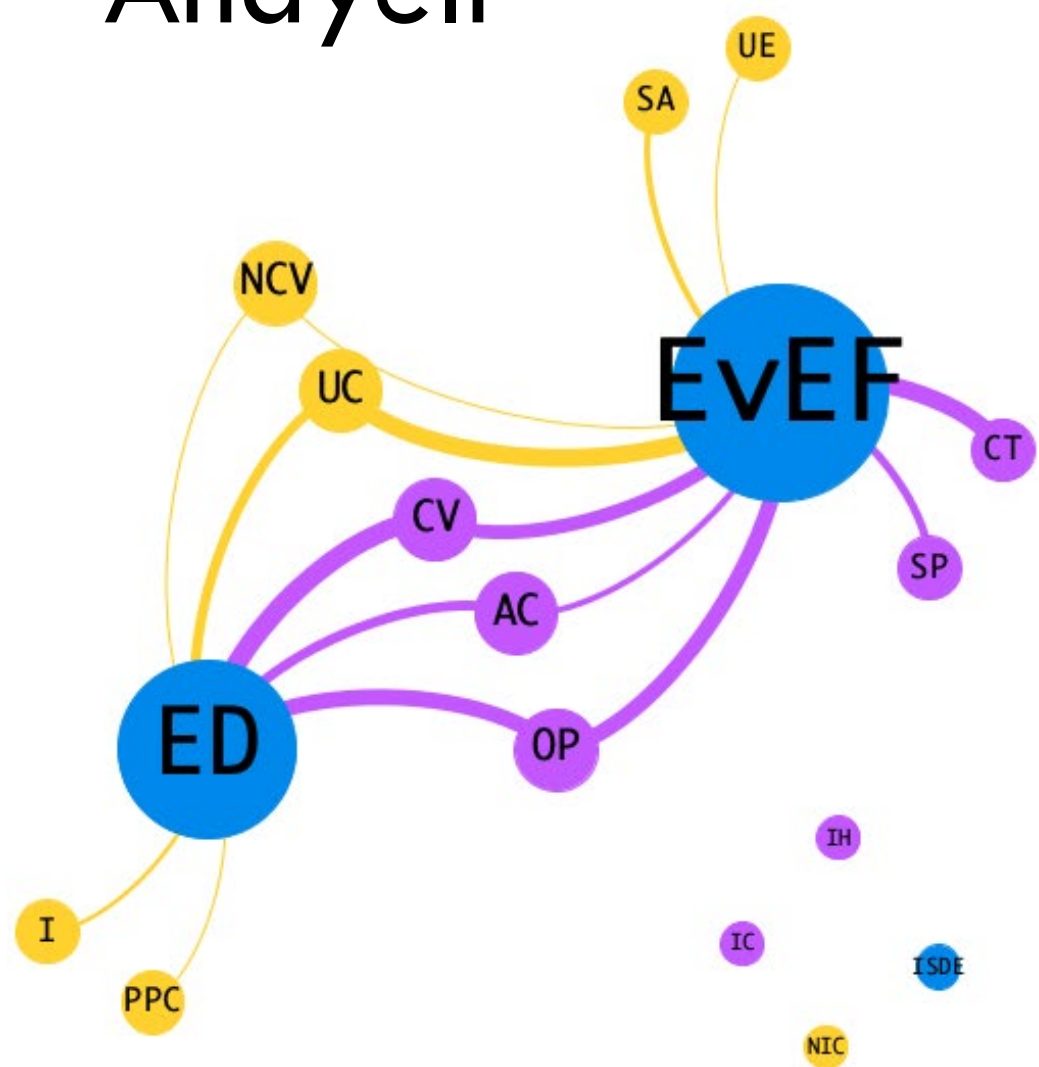
VIDEO RECORDING AND ANALYSIS



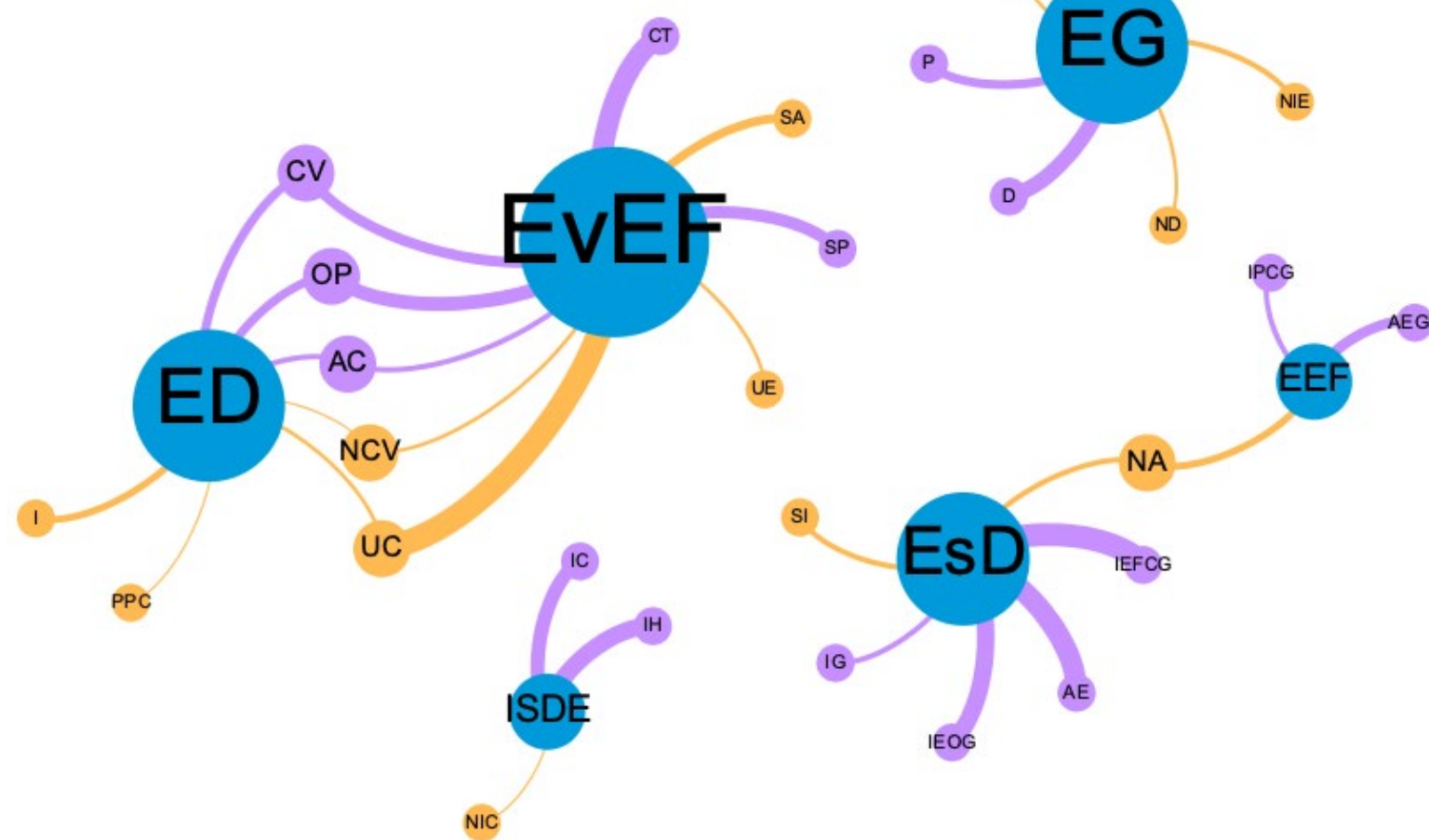
Gráfica 1. Frecuencia de las interacciones significativas docente - estudiante por estado grupal, de un total de 37 clases

Gráfica 2. Frecuencia de las interacciones significativas docente - estudiante por estado grupal, de las 20 clases con registro fisiológico

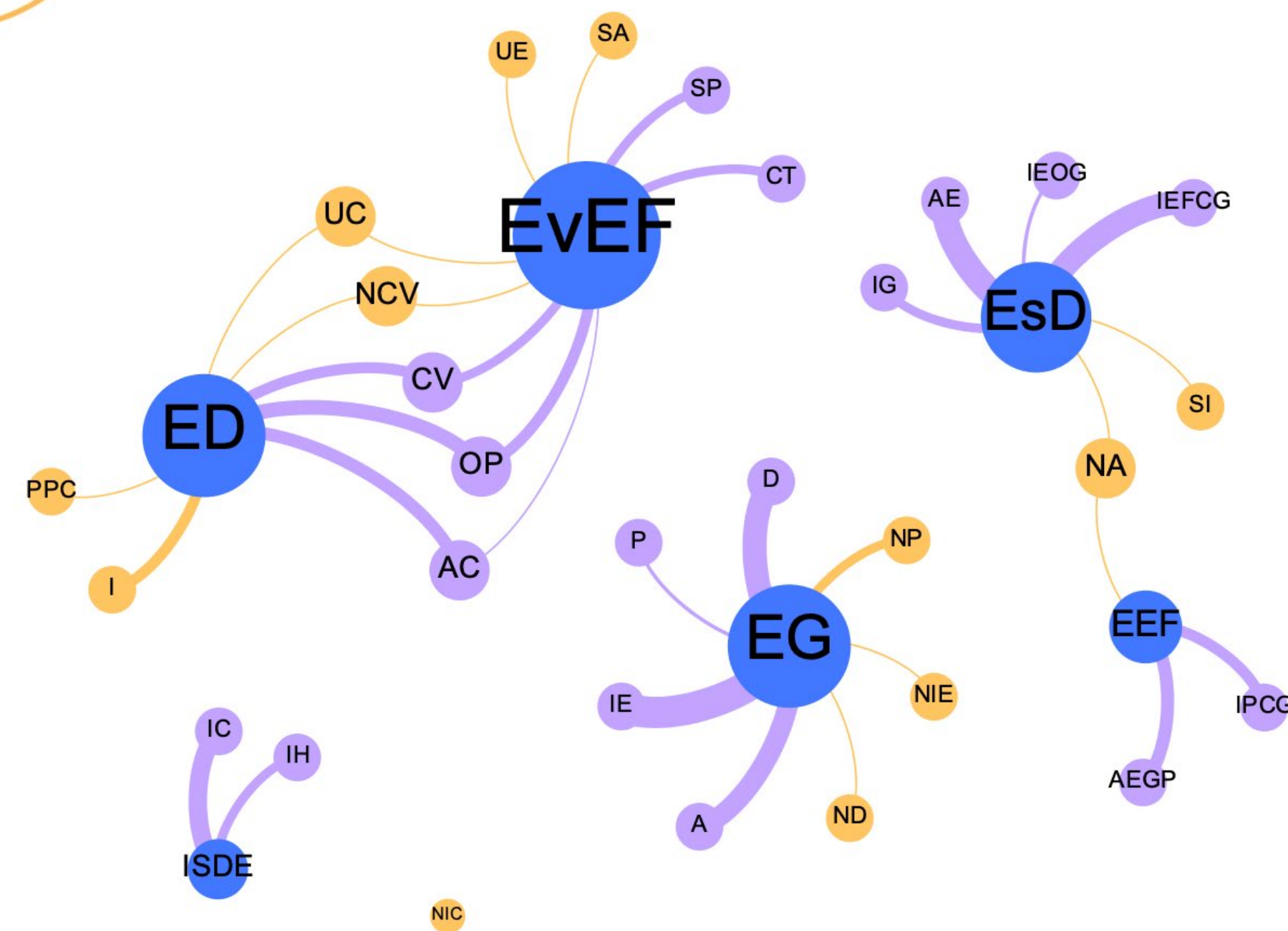
Anayeli



Cristina



Sylvia



Glosario

- ED: Evento docente
- EG: Estado grupal
- EsD: Estado docente:
- EEF: Estado estudiante focal
- EvEF: Evento estudiante focal
- ISDE: Interacción significativa docente-estudiante

Positivo

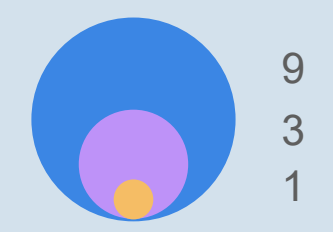
- A: Aplauso
- AC: Afirmación con la cabeza
- AE: Atención Estudiante
- AEGP: Atención Estudiante-Grupo o profesor
- CV: Contacto visual
- D: Diálogo
- IC: Interacción corpórea

- IE: Interacción emocional
- IEFCG: Interacción estudiante-focal
- IEOG: Interacción estudiante otro
- IG: Interacción grupo
- IH: Interacción humor
- IPCG: Interacción profesor
- OP: Orientación postura
- P: Práctica
- SP: Solicita palabra

Negativo

- CT: Come o toma
- I: Interrupción
- NA: No atención
- NCV: No contacto visual
- ND: No diálogo
- NIC: No interacción corpórea

- NIE: No Interacción emocional
- NP: No práctica
- PPC: Problemas con PC
- SI: Sin interacción
- SA: Sale del aula
- UC: Uso Celular
- UE: Usa espejo



OPEN QUESTIONS FOR TRAINING IN TEACHER ACCOMPANIMENT

Is every educator equipped to engage a sociocultural affective learning?

What might be the “criteria” for “licensing” an educator to engage sociocultural empathy effectively and ethically?

How do we ensure ethical responsibility on the part of the educator for possible emotional repercussions of these fraught dimensions of pedagogy?

Isn't the educator's discomfort or shared affectivity an equally important part of this call to action, this potential transformation?

How to deal with ‘collateral effects’ of activating and sharing emotions as pedagogical tools?

How to translate this evidence into policy recommendations?

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The End

Thanks!

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