Introduction to Pentabilities
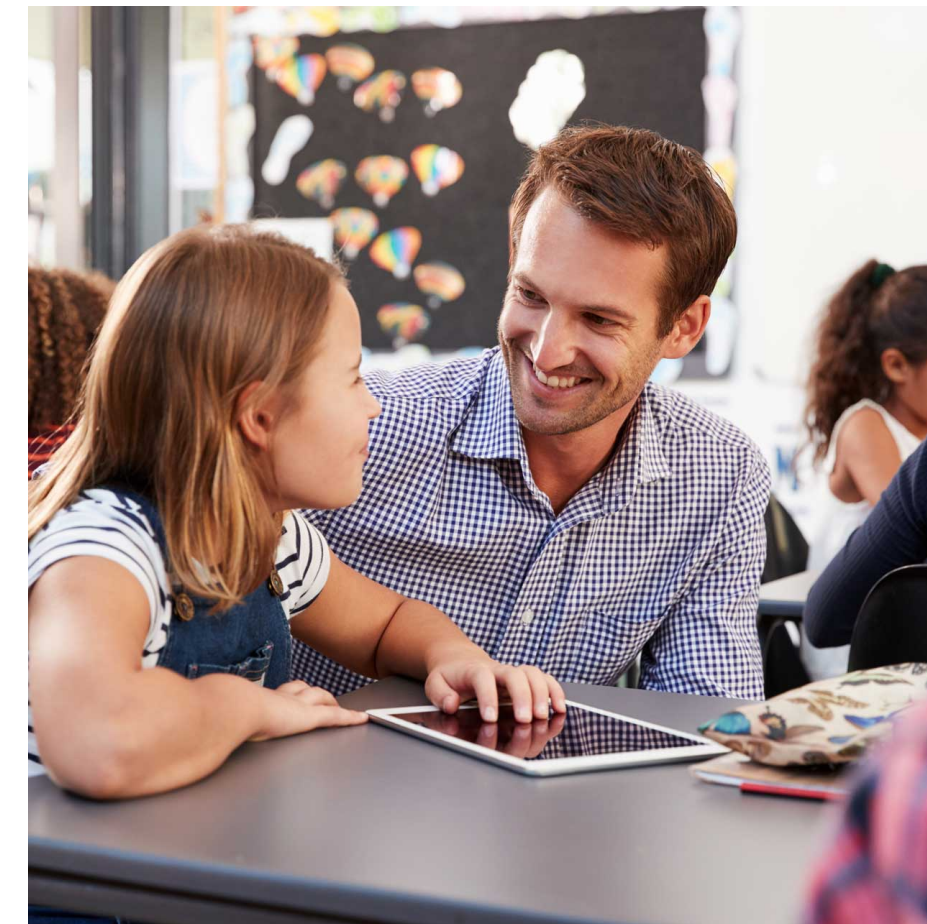
How to use Pentabilities to foster and assess socioemotional skills through formative assessment

July 5th, 2021

Assessment: Why is it a central piece in education?

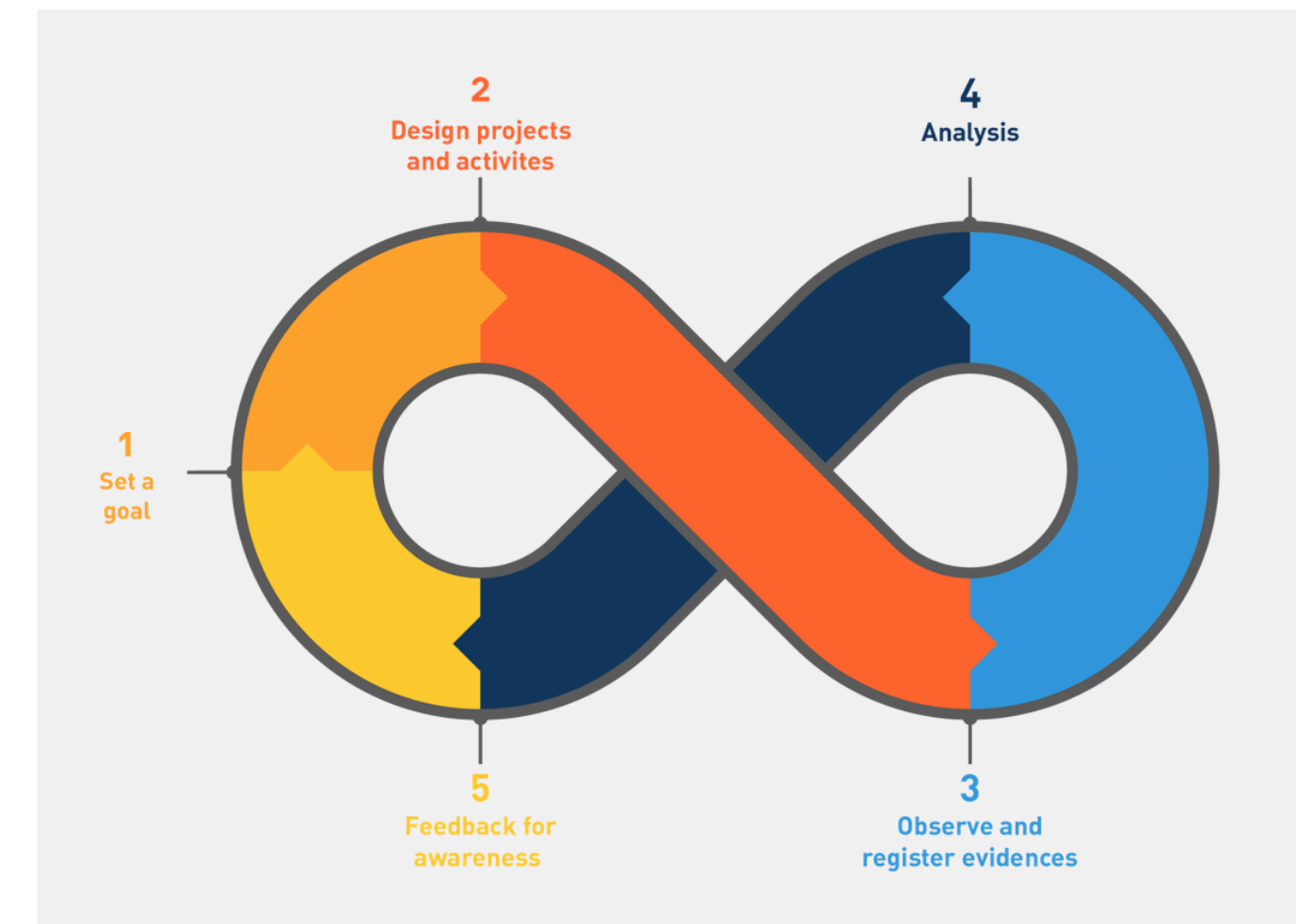*"Tell me how you assess, and I will tell you what and how your students learn"*

- Communicate to student, family and society the results of learning.

- Rank students.

- To guide the student on how to improve during their learning process.

- To guide teachers on how to advance in their teaching, what to do next.

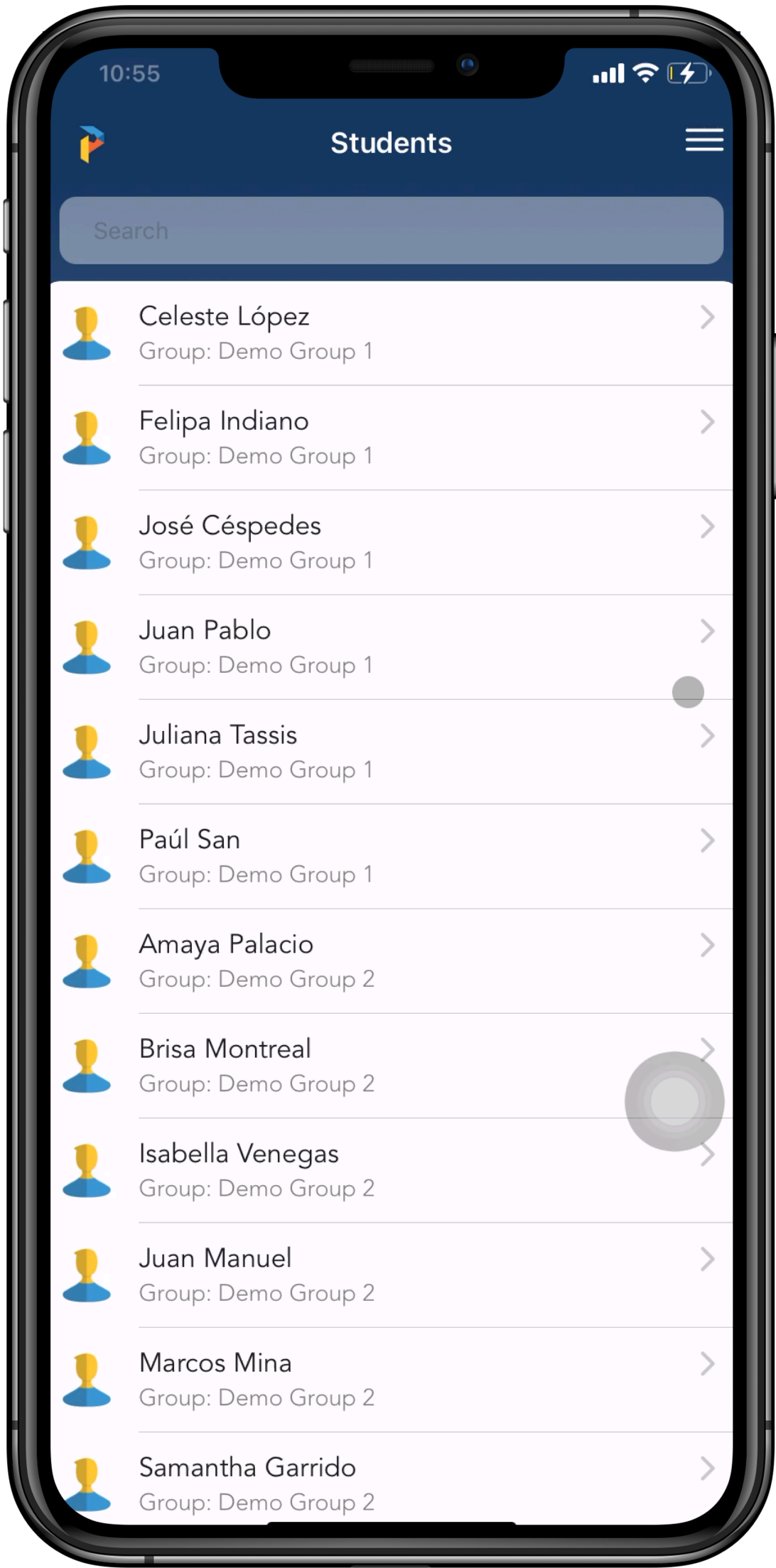- To inform teachers if their strategies work.

Formative assessment

Number 1 strategy for learning (Education Endowment Foundation, October 2018)

1. Clarify, share and understand the learning objectives

2. Elicit and collect evidences of the skills to be learned.

3. Give feedback that pushes the learner forward
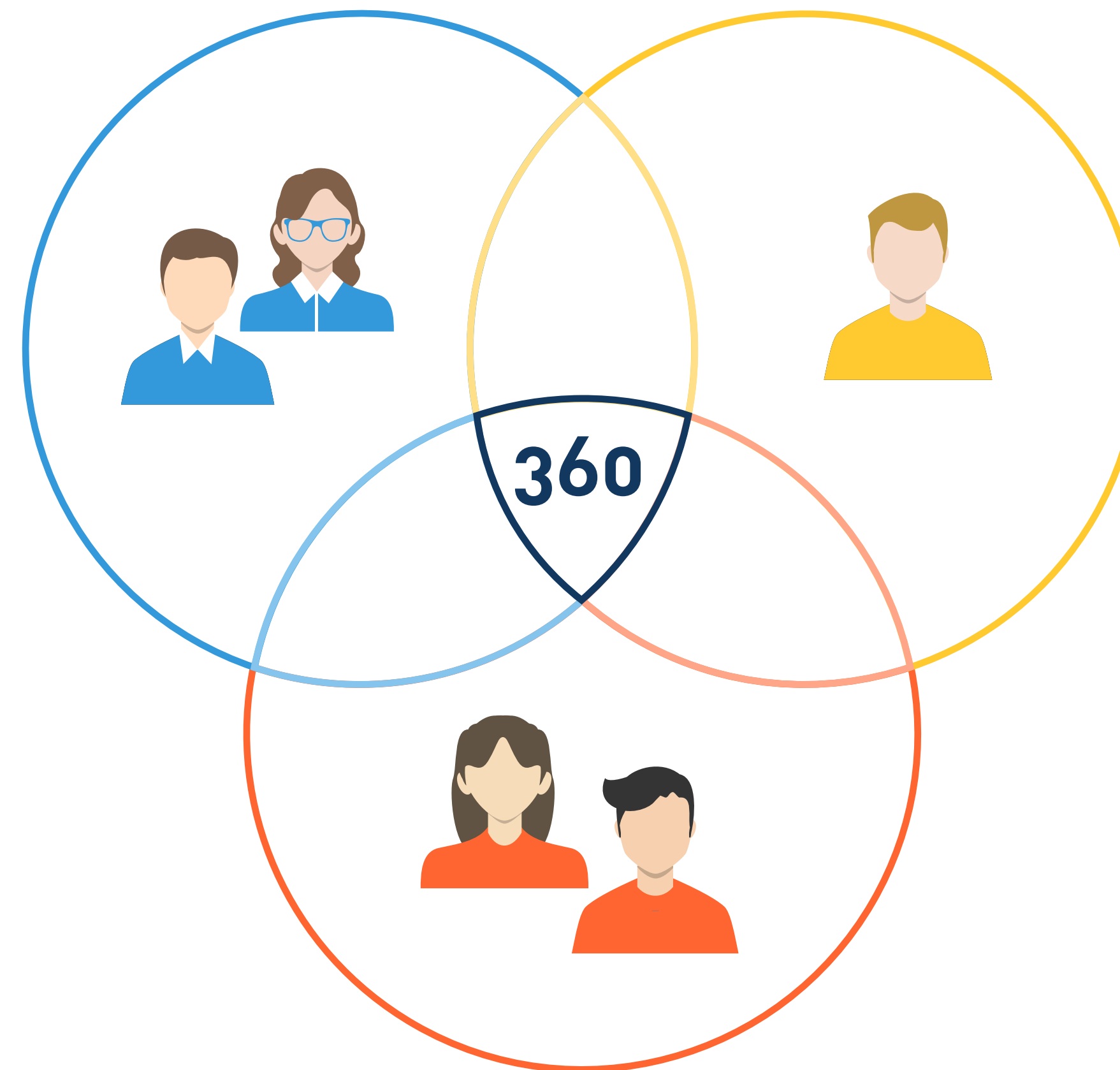
Pentabilities App Demo

Who evaluates?

Feedback 360

Teachers

Observation and instructive conversation.

10-15 min interaction or whole session.
Register evidences that have been
OBSERVED during that time frame

Self-assessment

360

Peers

Same group/external observers

Observation example

A teacher approaches a group that has been working on a first draft of a poster for a class exposition on the holocaust. One of the students starts explaining their work to the teacher:

S: Do you like it? I did it!

T: What is it?

S: Arms and... numbers... they are from the prisoners.

T: Are they from women, children, men...?

S: Woo I don't know... I just picked them random...

T: And what do these numbers correspond to? What is the meaning behind these numbers?

S: ......Prisoners

T: Why do they use numbers instead of names?

S: .....

Screen 1 — 14:45

Back — José Céspedes

Autonomy and Initiative

works without need of supervision, and asks for help when required. Brings up ideas and provides solutions when needed.

Brings up ideas
★★★★☆ (4 green)

Asks questions when stuck
☆☆☆☆☆

Plays an active role in group decision making
☆☆☆☆☆

Is able to convince others of his/her approaches
☆☆☆☆☆

Works with determination
★★☆☆☆ (2 orange)

Believes that he/she can initiate changes
☆☆☆☆☆

Screen 2 — 14:46

Back — José Céspedes

Thinking abilities

Open to intellectual, cultural and/or aesthetic stimuli. Intellectual inquiry, generation of ideas and metacognition skills

Relates new content with previous knowledge
☆☆☆☆☆

Makes good reflections on the content
★☆☆☆☆ (1 red)

Makes good reflections on internal personal processes
☆☆☆☆☆

Asks good questions (to improve understanding or to move forward)
☆☆☆☆☆

Has creative ideas (explores alternative paths)
★★★★☆ (4 green)

Proposes good strategies for problem solving
☆☆☆☆☆

Willing to discover different perspectives

Screen 3 — 14:49

Back — José Céspedes

Cooperation

listens and participates to take common decisions and solve conflicts

Listens to others
☆☆☆☆☆

Incorporates what others say
☆☆☆☆☆

Encourages peers' participation
☆☆☆☆☆

Engages in group decision making
☆☆☆☆☆

Facilitates conflict resolution
☆☆☆☆☆

Recognises personal responsabilities and those of others
★★☆☆☆ (2 orange)

Helps peers selflessly

Responsibility

Performs the tasks, trying to accomplish the set goals

Works in a constant manner

☆ ☆ ☆ ☆ ☆

Stays connected to the group's activity

★ ★ ★ ★ ★

Makes comments or engages in activities related to the task at hand

★ ★ ★ ★ ★

Performs tasks efficiently

☆ ☆ ☆ ☆ ☆

Performs tasks carefully

☆ ☆ ☆ ☆ ☆

Perseveres in the face of difficulties

☆ ☆ ☆ ☆ ☆

Respects the rules

☆ ☆ ☆ ☆ ☆

Autonomy and Initiative

works without need of supervision, and asks for help when required. Brings up ideas and provides solutions when needed.

Brings up ideas

★ ★ ★ ★ ★

Asks questions when stuck

☆ ☆ ☆ ☆ ☆

Plays an active role in group decision making

☆ ☆ ☆ ☆ ☆

Is able to convince others of his/her approaches

★ ★ ★ ★ ★

Works with determination

☆ ☆ ☆ ☆ ☆

Believes that he/she can initiate changes

☆ ☆ ☆ ☆ ☆

Emotion management

He is aware of his/her own emotions and those of others, and he manages them well

Transmits cheerfulness

☆ ☆ ☆ ☆ ☆

Remains calm under pressure

★ ★ ★ ★ ★

Controls emotions when conflict arises

☆ ☆ ☆ ☆ ☆

Accepts the possibility of making mistakes

★ ★ ★ ☆ ☆

Accepts that his/her approaches do not prosper

★ ★ ☆ ☆ ☆

Adapts behavior to the circumstances

☆ ☆ ☆ ☆ ☆

Thinking abilities

Open to intellectual, cultural and/or aesthetic stimuli. Intellectual inquiry, generation of ideas and metacognition skills

Relates new content with previous knowledge

★ ★ ★ ★ ★

Makes good reflections on the content

★ ★ ★ ★ ☆

Makes good reflections on internal personal processes

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Asks good questions (to improve understanding or to move forward)

☆ ☆ ☆ ☆ ☆

Has creative ideas (explores alternative paths)

☆ ☆ ☆ ☆ ☆

Proposes good strategies for problem solving

☆ ☆ ☆ ☆ ☆

Willing to discover different perspectives

★ ☆ ☆ ☆ ☆

Expresses ideas effectively (correction, precision and structure)

★ ★ ★ ★ ★

EXAMPLE 2

Screenshot 1 — 18:26

Juliana Tassis · **Juliana Tassis**

Autonomy and Initiative

works without need of supervision, and asks for help when required. Brings up ideas and provides solutions when needed.

Brings up ideas ☆☆☆☆☆

Asks questions when stuck ☆☆☆☆☆

Plays an active role in group decision making ★★★★★

Is able to convince others of his/her approaches ☆☆☆☆☆

Works with determination ★★★★★

Believes that he/she can initiate changes ★★★★★

Screenshot 2 — 18:25

Juliana Tassis · **Juliana Tassis**

Cooperation

listens and participates to take common decisions and solve conflicts

Listens to others ★★★★★

Incorporates what others say ★★★★★

Encourages peers' participation ☆☆☆☆☆

Engages in group decision making ☆☆☆☆☆

Facilitates conflict resolution ☆☆☆☆☆

Recognises personal responsabilities and those of others ☆☆☆☆☆

Helps peers selflessly

Screenshot 3 — 18:24

Juliana Tassis · **Juliana Tassis**

Responsibility

Performs the tasks, trying to accomplish the set goals

Works in a constant manner ★★★★★

Stays connected to the group's activity ★★★★★

Makes comments or engages in activities related to the task at hand ★★★★★

Performs tasks efficiently ☆☆☆☆☆

Performs tasks carefully ★★★★★

Perseveres in the face of difficulties ☆☆☆☆☆

Respects the rules ☆☆☆☆☆

Screenshot 4 — 18:33

Juliana Tassis · **Juliana Tassis**

Thinking abilities

Open to intellectual, cultural and/or aesthetic stimuli. Intellectual inquiry, generation of ideas and metacognition skills

Relates new content with previous knowledge ★★★★★

Makes good reflections on the content ☆☆☆☆☆

Makes good reflections on internal personal processes ☆☆☆☆☆

Asks good questions (to improve understanding or to move forward) ☆☆☆☆☆

Has creative ideas (explores alternative paths) ☆☆☆☆☆

Proposes good strategies for problem solving ★★★★★

Willing to discover different perspectives ★★★★★

Expresses ideas effectively (correction,

EXAMPLE 2

Responsibility

Performs the tasks, trying to accomplish the set goals

Works in a constant manner
★★★★★

Stays connected to the group's activity
★★★★★

Makes comments or engages in activities related to the task at hand
★★★★★

Performs tasks efficiently
☆☆☆☆☆

Performs tasks carefully
☆☆☆☆☆

Perseveres in the face of difficulties
☆☆☆☆☆

Respects the rules
☆☆☆☆☆

Cooperation

listens and participates to take common decisions and solve conflicts

Listens to others
★★★★★

Incorporates what others say
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Encourages peers' participation
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Engages in group decision making
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Facilitates conflict resolution
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Helps peers selflessly

Autonomy and Initiative

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Brings up ideas
☆☆☆☆☆

Asks questions when stuck
☆☆☆☆☆

Plays an active role in group decision making
★★★★★

Is able to convince others of his/her approaches
☆☆☆☆☆

Works with determination
★★☆☆☆

Believes that he/she can initiate changes
☆☆☆☆☆

Thinking abilities

Open to intellectual, cultural and/or aesthetic stimuli. Intellectual inquiry, generation of ideas and metacognition skills

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Has creative ideas (explores alternative paths)
★★★★★

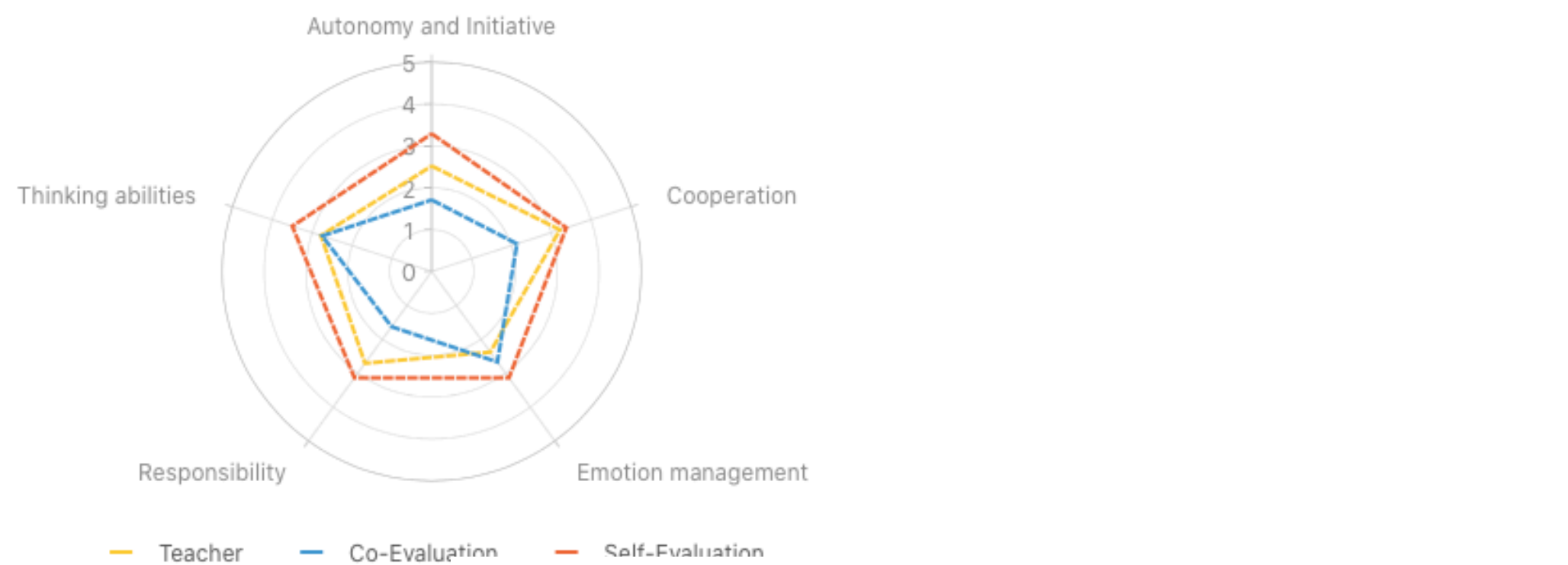Proposes good strategies for problem solving
★★★★☆

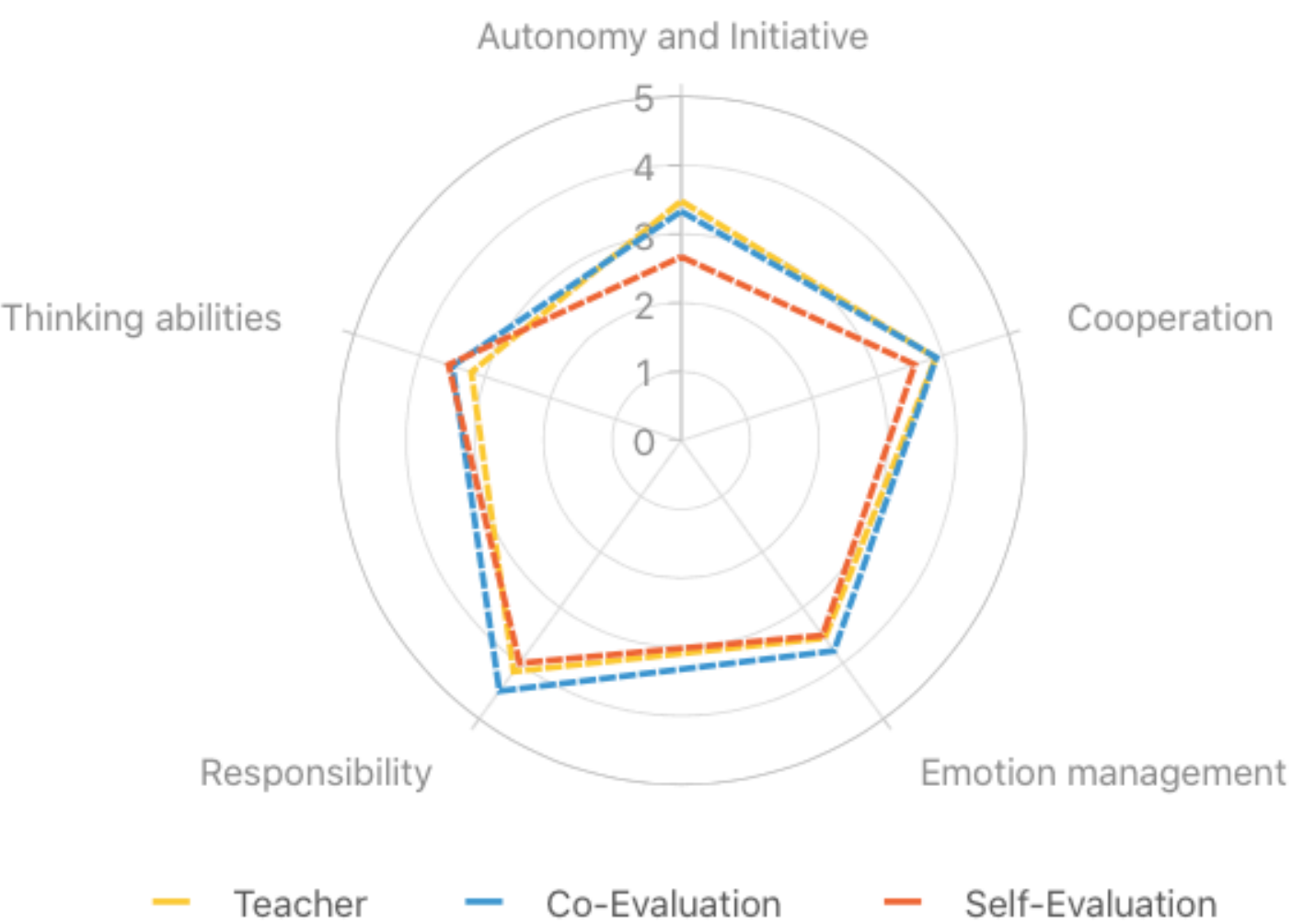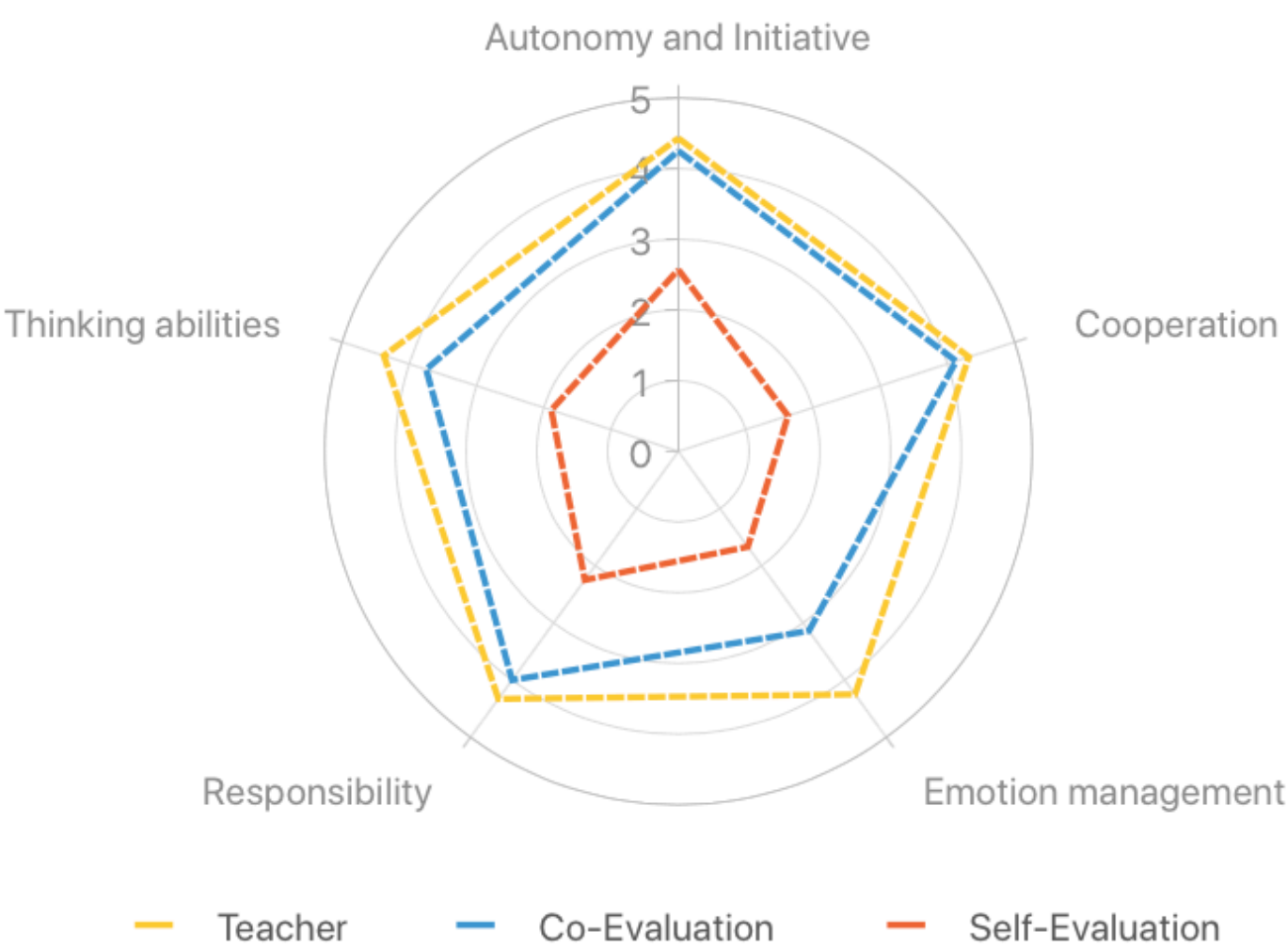Willing to discover different perspectives
★★☆☆☆

What do we do with the data? Student reports

Overall Category evaluation by observer so far

This is your mean score by each observer. The scores are calculated as averages of all behaviors scored from each skill in all sessions. The scores correspond to the average of the valuations of skills and their associated behaviors.

Categories	Teacher	Co-Evaluation	Self-Evaluation
Autonomy and Initiative	2.52	1.71	3.29
Cooperation	3.22	2.14	3.38
Emotion management	2.38	2.67	3.14
Responsibility	2.71	1.63	3.14
Thinking abilities	2.78	2.75	3.5

Overall behavior valuations by type of observer so far

Under each of the categories below, you will find the mean score of the behaviors that are associated with these skills.
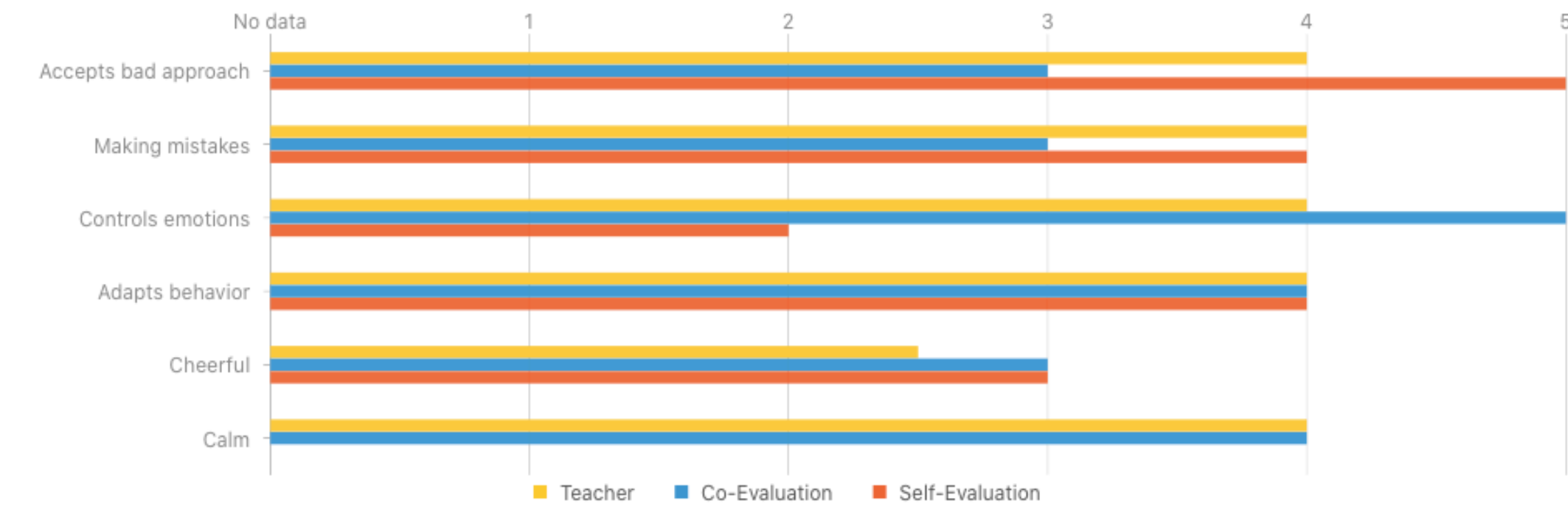
Autonomy and Initiative

Legend: Teacher, Co-Evaluation, Self-Evaluation

Behaviors: Asks questions, Ideas, Active role, Convincing, Initiates change, Determination

Cooperation

Legend: Teacher, Co-Evaluation, Self-Evaluation

Behaviors: Encourages participation, Group decision making, Conflict resolution, Incorporates others, Helps, Listens, Recognizes responsibilities

Emotion management

Legend: Teacher, Co-Evaluation, Self-Evaluation

Behaviors: Accepts bad approach, Making mistakes, Controls emotions, Adapts behavior, Cheerful, Calm

Responsibility

Legend: Teacher, Co-Evaluation, Self-Evaluation

Behaviors: Engages in activities, Stays connected, Performs carefully, Performs efficiently, Perseveres, Respects, Works consistently

Thinking abilities

Legend: Teacher, Co-Evaluation, Self-Evaluation

Behaviors: Questions well, Different perspectives, Expresses effectively, Creative, Problem solving, Reflections–content, Reflections–personal, Relates

Over time progression

Evaluation by session

Legend: Autonomy and Initiative · Cooperation · Emotion management · Responsibility · Thinking abilities

Reflection – Personal Portfolio

The report does not reflect who you are, but a set of behaviors that yourself, your peers and teachers have observed during this project.

The relevance is not how good or bad the valuations are, but the personal insights and self-awareness you are able to extract from it, and how you project a road map for personal growth.

Here are some guiding questions for your written reflection.

1. How do these assessments reflect how I perceive I have worked, contributed and got out of this course? Any significant surprises? Why?

2. What am I good at? How have I become good at it?

3. What skills do I need to develop? Why do you think it is important that you do? How do they affect your work and personal progress?

4. Based on your previous answer, write a road map that guides you from where you are to where you want to be in the following sessions.

According to my peers, who have given me very high grades in all categories, I could still work on my acceptance that my ideas do not prosper. I totally understand that. I have a lot of ideas, of which all are not always the best, even though I tend to initially think they are.

....

My ability to manage my emotion has not really improved. It seems I even started with more control than what I ended. I know I can be pretty energic (too much maybe) and impulsive at some points. Sometimes, hiding my emotions and thinking straight can be hard. I was also working with people I don't really know. Moreover, the group was not really made of diverse members.

....

I however could understand the 3/5 in "Works with determination" as I may get off target sometimes. I know focusing can sometimes be an issue. It has been getting better these past few years, but I still need to work on it.
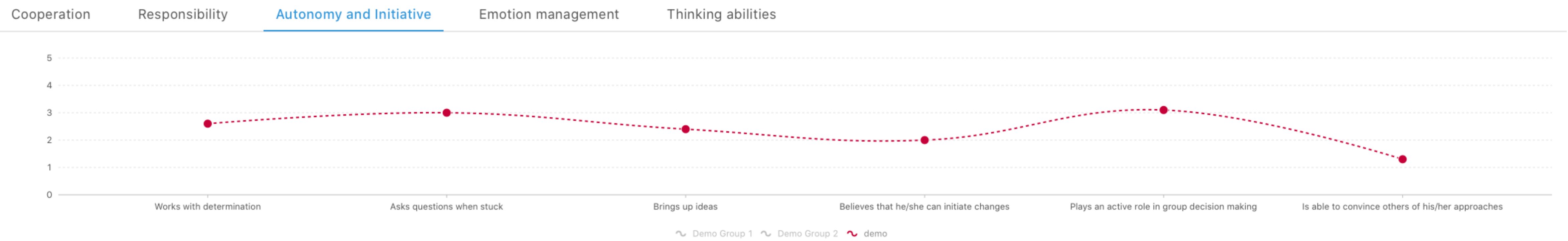
....

What do we do with the data? Teacher feedback

Group analysis

Group analysis

Key moments for implementation

- Planning of projects / challenges / activities: what are the objectives and skills to be developed.

Stage of the Project		
Activity	Learning Objectives	Pentabilities to observe
Understanding the problem (visual thinking)	Empathy Interview	Cooperation Emotion management
Research	Precedent Analysis	Thinking Abilities Responsibility Autonomy and Initiative
Brainstorming	Idea Generation	Autonomy and initiative
Prototyping	Research Construction Problem solving	Thinking abilities Autonomy and initiative
Critique and Feedback	Communication Critical thinking Growth Mindset	Thinking abilities Emotion management
Development	Use and learn necessary technical skills Troubleshooting Team work	Responsability Cooperation Thinking abilities Autonomy and Initiative Emotion Management
Final Presentation	Communication Critical thinking Process Evaluation Growth mindset	Thinking abilities Emotion management

Key moments for implementation

- Share goals and quality criteria

Recognizes personal responsibilities and those of others (Responsibility) is highest valued when:

  ○ A student does all the group work because the others are not doing anything.

  ○ A student tells everyone their role on the group project, making sure that everything is covered and will be done.

  ○ A student does the part the group has agreed on and expects the others to do theirs.

  ○ A student does the part the group has agreed on and facilitates that the others can do theirs.

Believes that he/she can initiate changes (Autonomy and Initiative) is a sign of:

  ○ Self-confidence and the idea that one can have control of the outcomes, by bringing ideas to actions and actions to outcomes.

  ○ Confidence on positive outcomes if teachers and the environment are appropriate.

  ○ Belief that there are always people ready to help in your mission.

  ○ Self-confidence based on the positive commentas that the student has always received so far.

Which of the following behaviors (from Thinking abilities) would you rate negatively to register that a person is being inflexible, intolerant or showing prejudices?

○ Proposes good strategies for problem solving

○ Willing to discover different perspectives

○ Relates new content with previous knowledge

○ Has creative ideas (explores alternative paths)

○ Asks good questions (to improve understanding or to move forward)

Key moments for implementation

- Reflection and Feedback sessions (not only tutors)