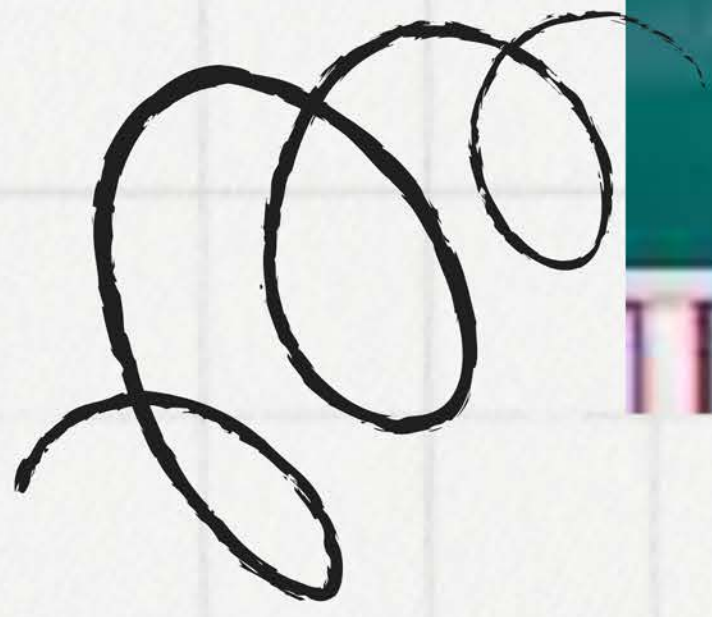# THE ENIGMA: DISTANGLING SCIENCE IN LANGUAGE , LANGUAGE IN SCIENCE

CLIL Connect Conference
21 & 22 november 2024
Leuven,Belgium

Presented by: Benan Rifaioglu Alahdab
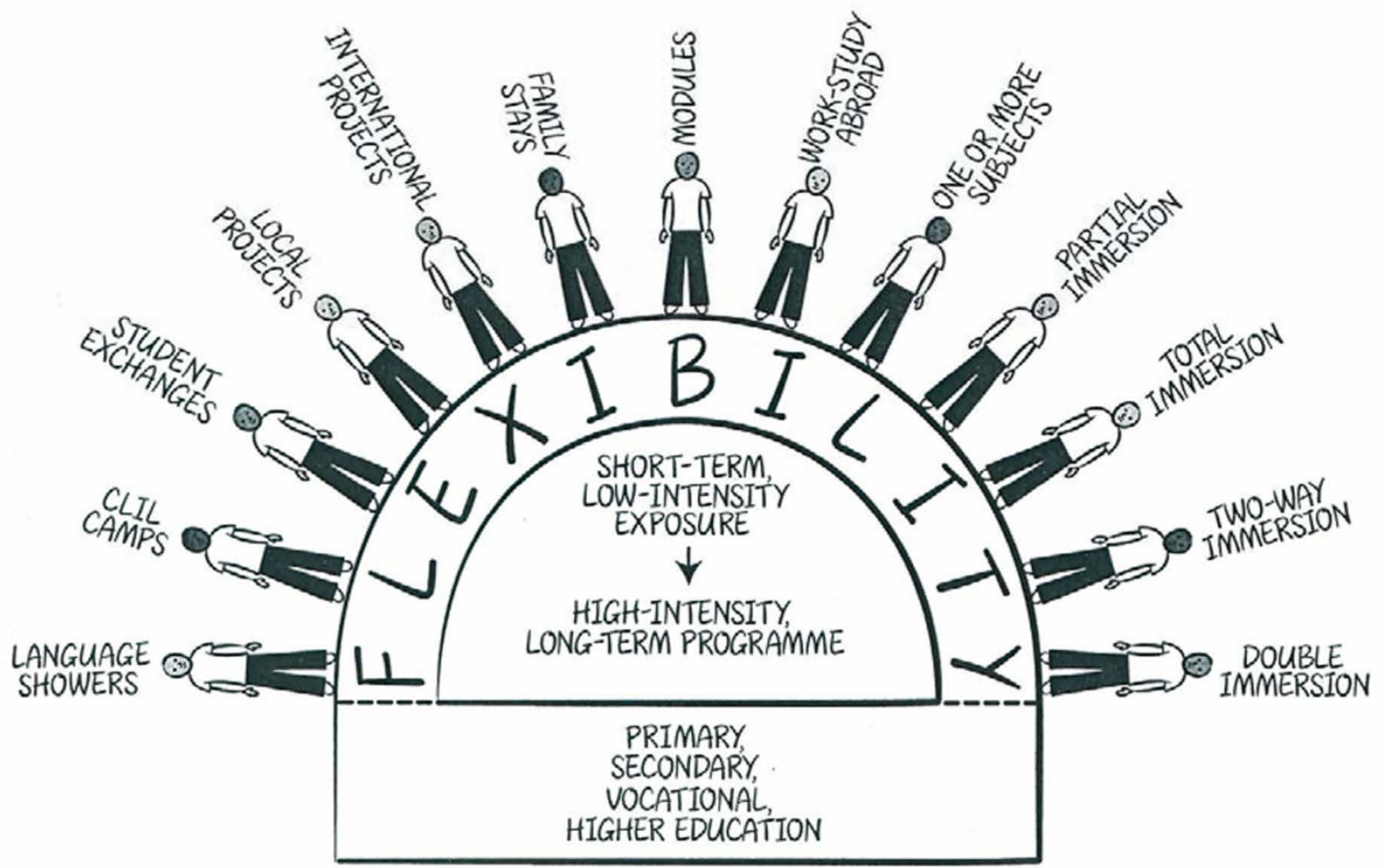**Co-presented by : Nalan Atabek**

CLIL CONNECT
2024

TO CLIL OR NOT TO CLIL?

ΤΟ CLIL 😎

What is CLIL?

THE MANY FACES OF CLIL

FLEXIBILITY

- INTERNATIONAL PROJECTS
- FAMILY STAYS
- MODULES
- WORK-STUDY ABROAD
- ONE OR MORE SUBJECTS
- LOCAL PROJECTS
- PARTIAL IMMERSION
- STUDENT EXCHANGES
- TOTAL IMMERSION
- CLIL CAMPS
- TWO-WAY IMMERSION
- LANGUAGE SHOWERS
- DOUBLE IMMERSION

SHORT-TERM, LOW-INTENSITY EXPOSURE
↓
HIGH-INTENSITY, LONG-TERM PROGRAMME

PRIMARY, SECONDARY, VOCATIONAL, HIGHER EDUCATION

CONTENT-BASED LANGUAGE TEACHING: A CONTINUUM OF CONTENT AND LANGUAGE INTEGRATION

Content Driven   **Language Driven**

Total Immersion   Partial Immersion   Sheltered Courses   Adjunct Model   Themed Based Courses   Language classes with frequent use of content for
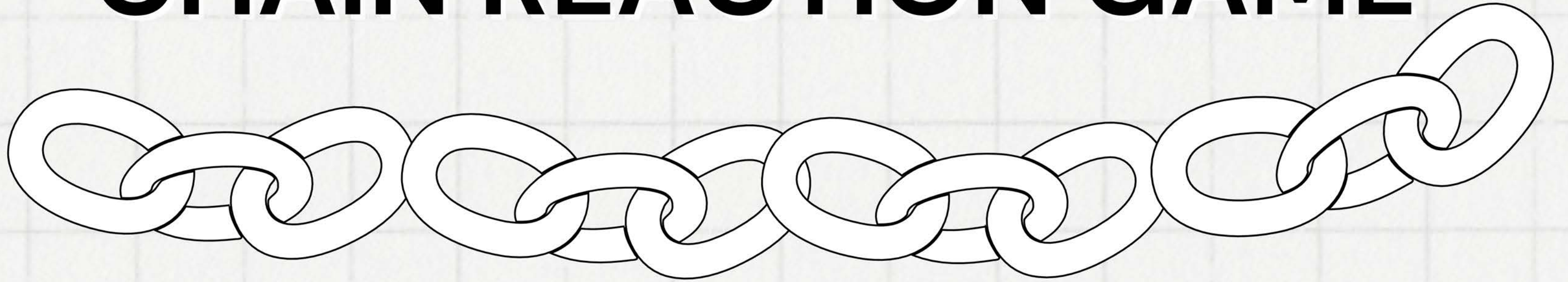
CHAIN REACTION GAME

If the temperature rises, glaciers will melt.

REVERSE ENGINEERING

Sea levels rise   Glaciers melt   Global temperatures increase
CO2 levels rise.

CREATIVE CHAIN REACTION GAME

If there's a solar eclipse, students will be curious,
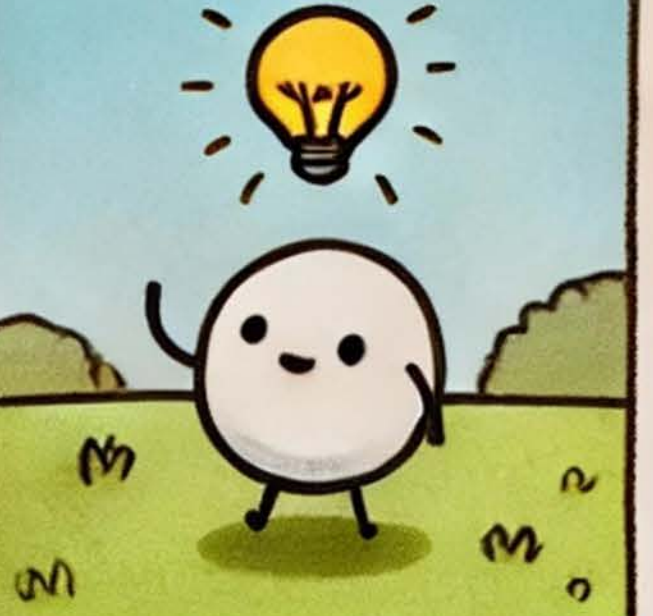
If students are curious, they will ask more questions....
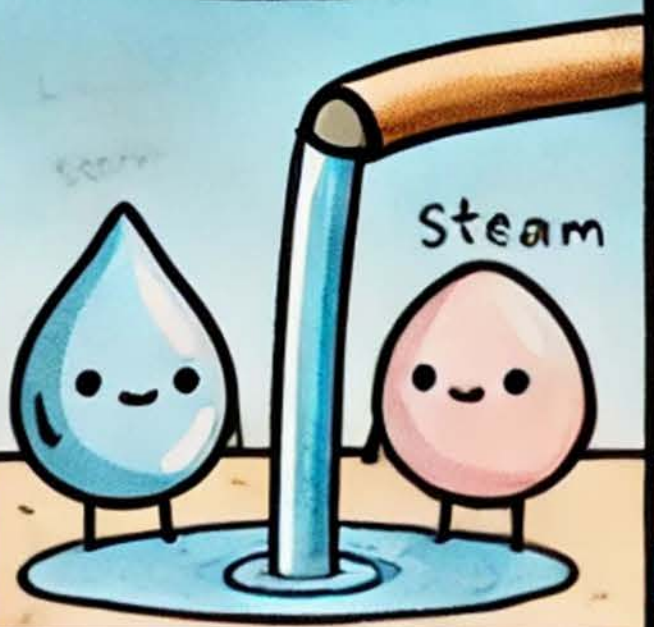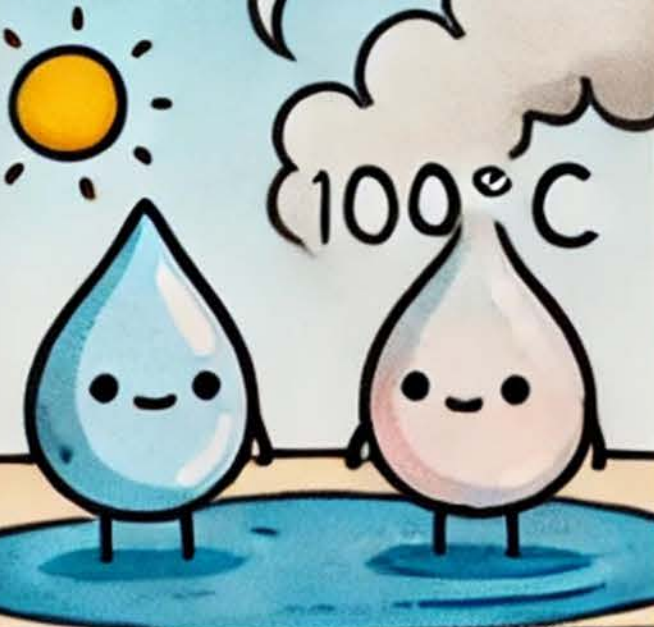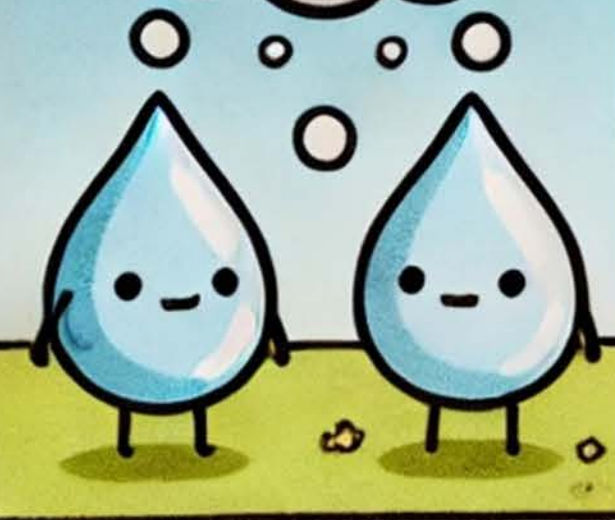
- **If we live on Mars,**..
- **"If we build habitats on Mars,**..
- **"If we have enough water on Mars,**..
- **"If humans travel to Mars,**..
- **"If we send robots to Mars,**..

- **If we live on Mars, we will need to grow our own food."**
- **"If we build habitats on Mars, they will protect us from radiation."**
- **"If we have enough water on Mars, we will be able to sustain life."**
- **"If humans travel to Mars, they will experience lower gravity."**
- **"If we send robots to Mars, they will help us build the first colonies."**

WHAT WOULD YOUR IDEAL CLIL ENGLISH TEACHER DO

IN THEIR OWN LESSONS?

- Type of English
- Lesson topics / content
- Materials / resources
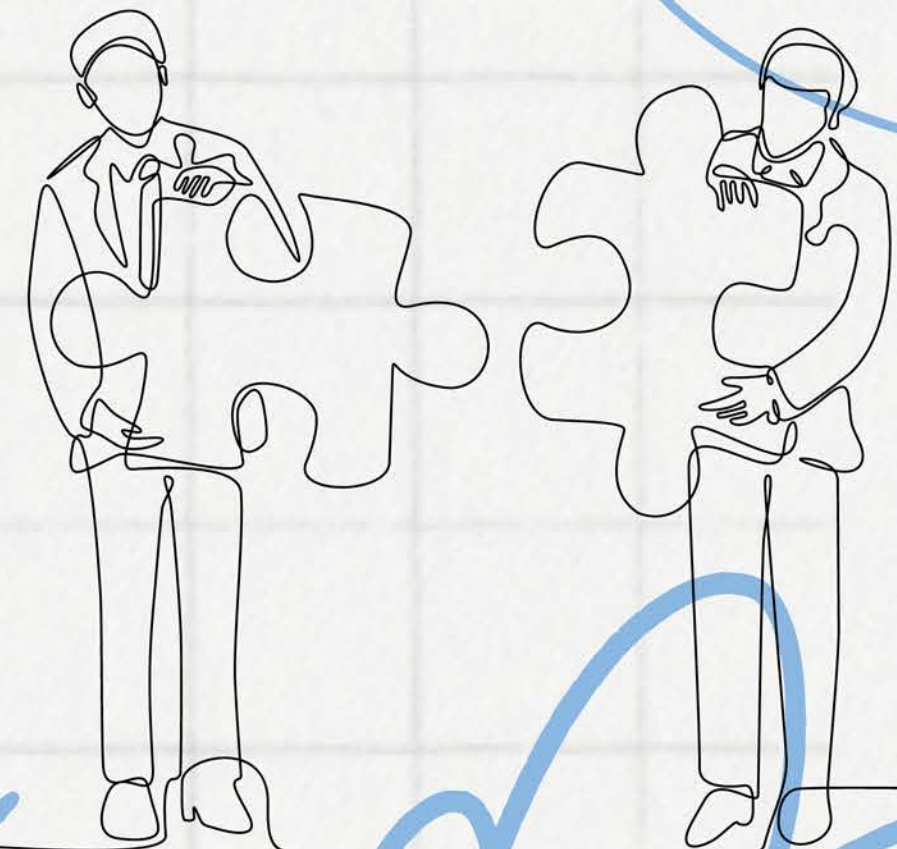- Language focus (grammar, vocabulary, skills, strategies, other)
- Feedback
- Assessment
- Other

TOGETHER WITH SUBJECT TEACHERS?

- Lesson planning
- Teaching together
- Lesson evaluation
- Assessment
- Projects
- Coaching
- Other

Subject	Science
Theme	States of matter
Content objective	Students will be able to identify different states of matter
Language objectives	-Students will form zero and first conditional sentences to describe scientific facts. Students will use conditionals to predict scientific outcomes.
Cognitive Skills	Predicting,identifying,explaining,reporting
Language Function	Talking about assumptions "*If we send a probe to Mars, it collects data about the surface.*
Key Language	Vocabulary: solid, liquid,gas,melts,boils,freezes,boiling .

How to plan a CLIL a lesson?

- ⬚ Define **Content**
- ❑ What will I teach?
- ❑ What will they learn?
- ❑ What are my teaching objectives/aims?
- ❑ What are the learning outcomes?

- ⬚ Explore the **thinking skills** according to **content** and **cognition**
- ❑ What kind of questions must I ask in order to go beyond 'display' questions?
- ❑ Which tasks will I develop to encourage higher order thinking skills?

- ⬚ Link content with **Communication.**
- ❑ What language do they need to work with the content?
- ❑ Specialised vocabulary and phrases use?
- ❑ What kind of talk will they engage in?
- ❑ Will I need to check my out key grammatical coverage?
- ❑ Discussion and debates included?

- ⬚ Weave **Culture** into your lessons
- ❑ What are the cultural implications of the topic?
- ❑ How does the context allow for 'value added'?
- ❑ What about 'otherness and self'
- ❑ How does this connect with the all Cs?

SOME PROBLEMS WHILE
TEACHERS INTEGRATING CONTENT& LANGUAGE

➤ Collaboration of content and language teachers!

➤ Demands of the national curriculum vs school curriculum

➤ Subject area expertise

➤ Assessment needs in CLIL

➤ Lack of teacher professional development

➤ Heavy load and shortage of materials
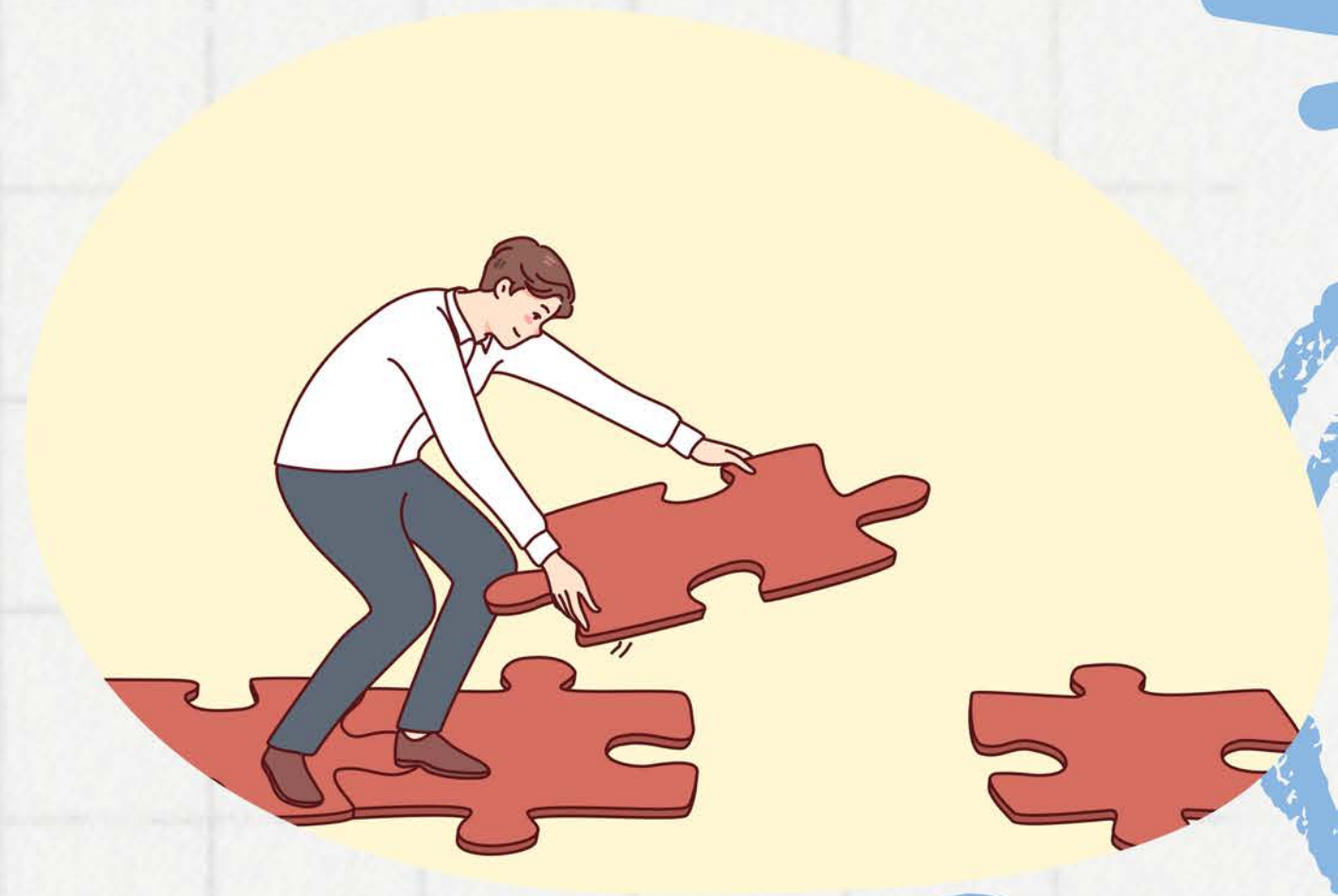
SOME PROBLEMS WHILE
TEACHERS INTEGRATING CONTENT& LANGUAGE

✓ Many content teachers often do not see "language" as part of their responsibility (apart from vocabulary) (e.g., Cammarata & Cavanagh, 2018; Hüttner et al., 2013; Morton, 2013; Pérez-Cañado, 2016)

✓ While subject teachers increasingly see language as part of their job, they do not formulate language learning goals and show only little language-related attention during subject tasks in class (Kirsten 2019, van Kampen et al. 2018; Hu & Gao 2021; Bauer-Marschallinger et al. 2021; Lersundi 2022)

✓ Command verbs nicely highlight how we expect learners to verbalize their subject-specific competences (Dalton-Puffer, 2013; 2016)

✓ Very often, teachers expect very specific language for it to be viewed as "appropriate" for the subject

BLOOM'S TAXONOMY

Create	**Use Existing Information to make something new** Invent, Develop, Design, Compose, Generate, Construct	
Evaluate	**Make judgments based on sound analysis** Assess, Judge, Defend, Prioritize, Critique, Recommend	
Analyze	**Explore relationships, causes, and connections** Compare, Contrast, Categorize, Organize, Distinguish	
Apply	**Use existing knowledge in new contexts** Practice, Calculate, Implement, Operate, Use, Illustrate	
Understand	**Grasp the meaning of something** Explain, Paraphrase, Report, Describe, Summarize	
Remember	**Retain and recall information** Reiterate, Memorize, Duplicate, Repeat, Identify	

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Cognitive Discourse Functions	Description	Example
Classify	Grouping or categorizing items, concepts, or phenomena based on shared characteristics.	Animals can be classified as mammals, reptiles, amphibians, birds, and fish."
Define	Explaining the meaning of a term or concept.	Photosynthesis is the process by which green plants produce energy from sunlight."
Describe	Providing detailed information about characteristics, processes, or phenomena.	The water cycle includes evaporation, condensation, precipitation, and collection."
Explain	Offering reasoning or justification for processes, events, or phenomena.	A volcanic eruption occurs because magma builds up pressure beneath the Earth's crust.
Evaluate	Judging or assessing the value, importance, or effectiveness of something.	The policy was effective in reducing carbon emissions, but it was expensive to implement."
Explore	Investigating a concept, process, or phenomenon by examining different perspectives or possibilities.	What could happen if renewable energy was implemented globally?"
Report	Presenting findings, outcomes, or results of an investigation, experiment, or process.	The survey results showed that 70% of participants preferred renewable energy over fossil fuels."

Dalton-Puffer, C. (2013). A construct of cognitive discourse functions for conceptualising content-language integration in CLIL and multilingual education. European Journal of Applied Linguistics, 1(2), 216–253.
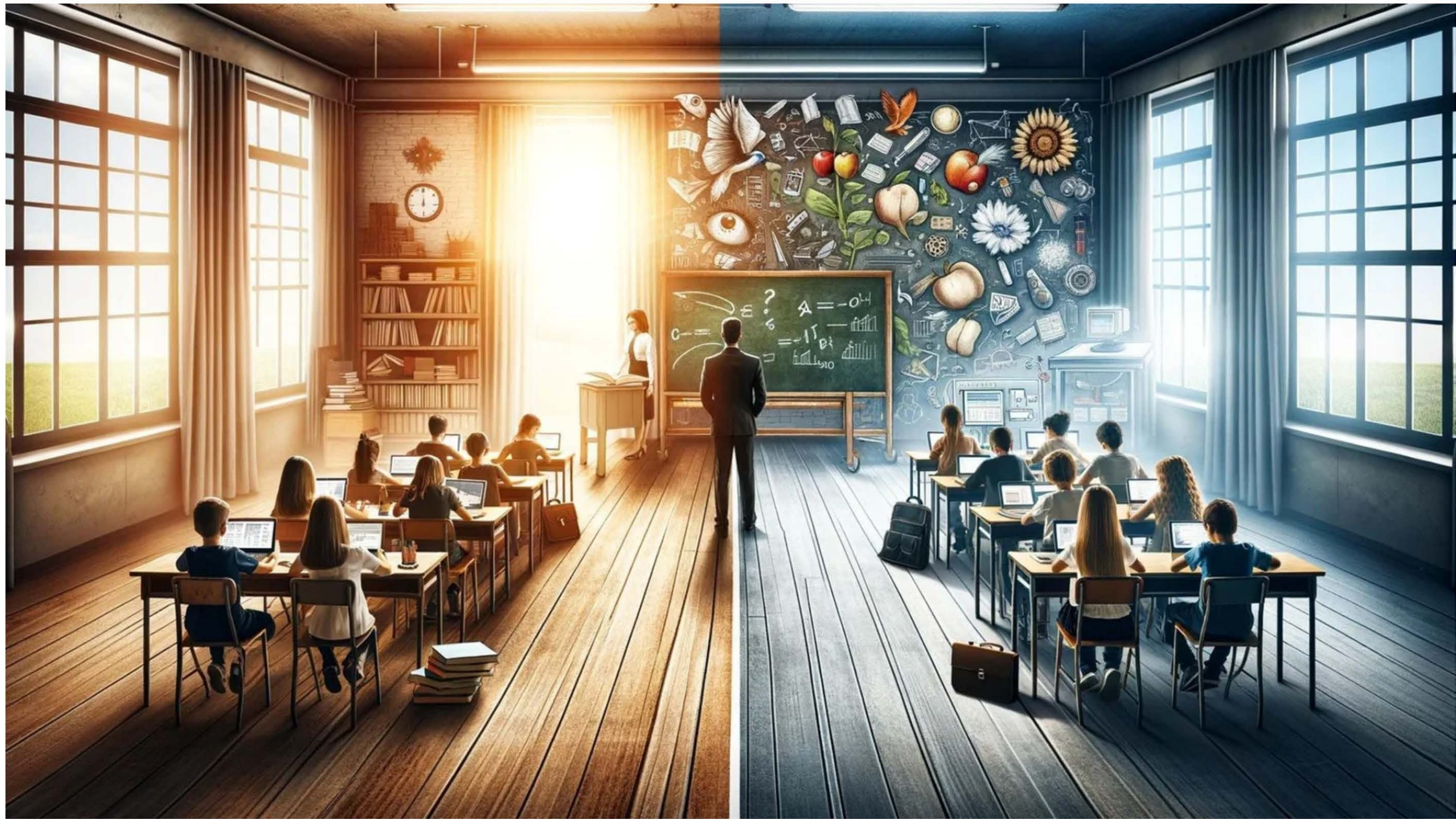
Advancing bi/multilingual disciplinary literacies with CLIL NetLE

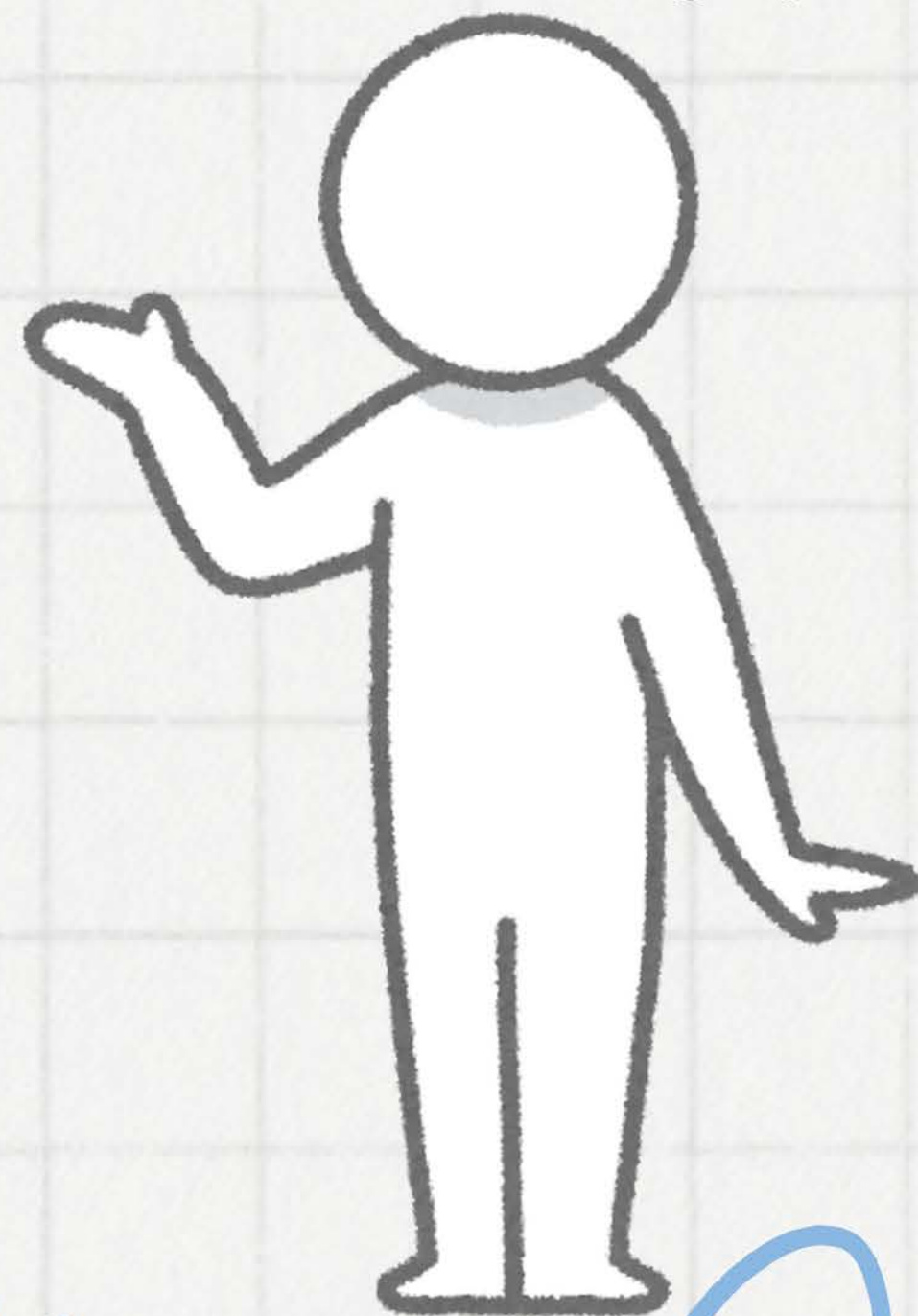This is where the concept of Disciplinary Literacies comes in.

Watch on YouTube

TOILET RULES

If you lift it...*Put it down*
If it runs out...*Replace it*
If you miss...*Clean it up*
If you're finished...*Flush it*
If it smells...*Spray it*

BENAN RIFAIOGLU ALAHDAB
benan.ralahdab@goaltesting.com

NALAN ATABEK
n.atabek@opohvt.nl