

THE TELESCOPE

Teaching in the Age of AI:

Seeing what
matters



Linda Castañeda
University of Murcia

FOUR SEMINARS.

FOUR INSTRUMENTS
FOR SEEING
EDUCATION
DIFFERENTLY.

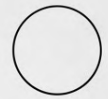
EDUCATIONAL OPTICS

FOUR INSTRUMENTS FOR SEEING
AND SHAPING LEARNING SPACES

SYDNEY · JULY–SEPTEMBER 2026



PRISM



LENS



MIRROR



TELESCOPE

LINDA CASTAÑEDA



UNIVERSIDAD DE MURCIA







Golfo de Cádiz

Burdeos

Génova

Toulouse

Nîmes

Mónaco

Pisa

Florence

Montpellier Marsella

Cannes

Corse

Sardegna

Cagliari

Palma

Túnez

تونس

Susa

سوسة

Sfax

سفاقس

Argel

مدينة الجزائر

Uchda

وحدة

Fez

Rabat

Gibraltar

Málaga

Almería

Granada

Huelva

Albufeira

Faro

Sevilla

Badajoz

Lisboa

Portugal

Coimbra

Oporto

Vigo

Orense

Santiago de Compostela

La Coruña

Gijón

Oviedo

León

Santander

Bilbao

San Sebastián

Vitoria-Gasteiz

Valladolid

Salamanca

Madrid

Toledo

Zaragoza

Valencia

Castellón de la Plana

Tarragona

Barcelona

Gerona

Murcia

Alcantar

Benidorm



“Image from last night showing a wide field [ie zoomed out] built by stitching a few pictures together. Just one annoying satellite trail remaining. The bright star in the corner is called Sadr in the constellation Cygnus (the Swan). It is a giant star which gives off 33,000 times as much energy as the Sun and is 1,800 light years away. Like many stars, it's name is from the Arabic astronomers of the middle ages, who called it Sadr al Dedjadjet, (صدر الدجاجة / ṣadr al-dajāja) which translates to 'the chest of the hen' . The surrounding region is full of hydrogen and dust grains.”

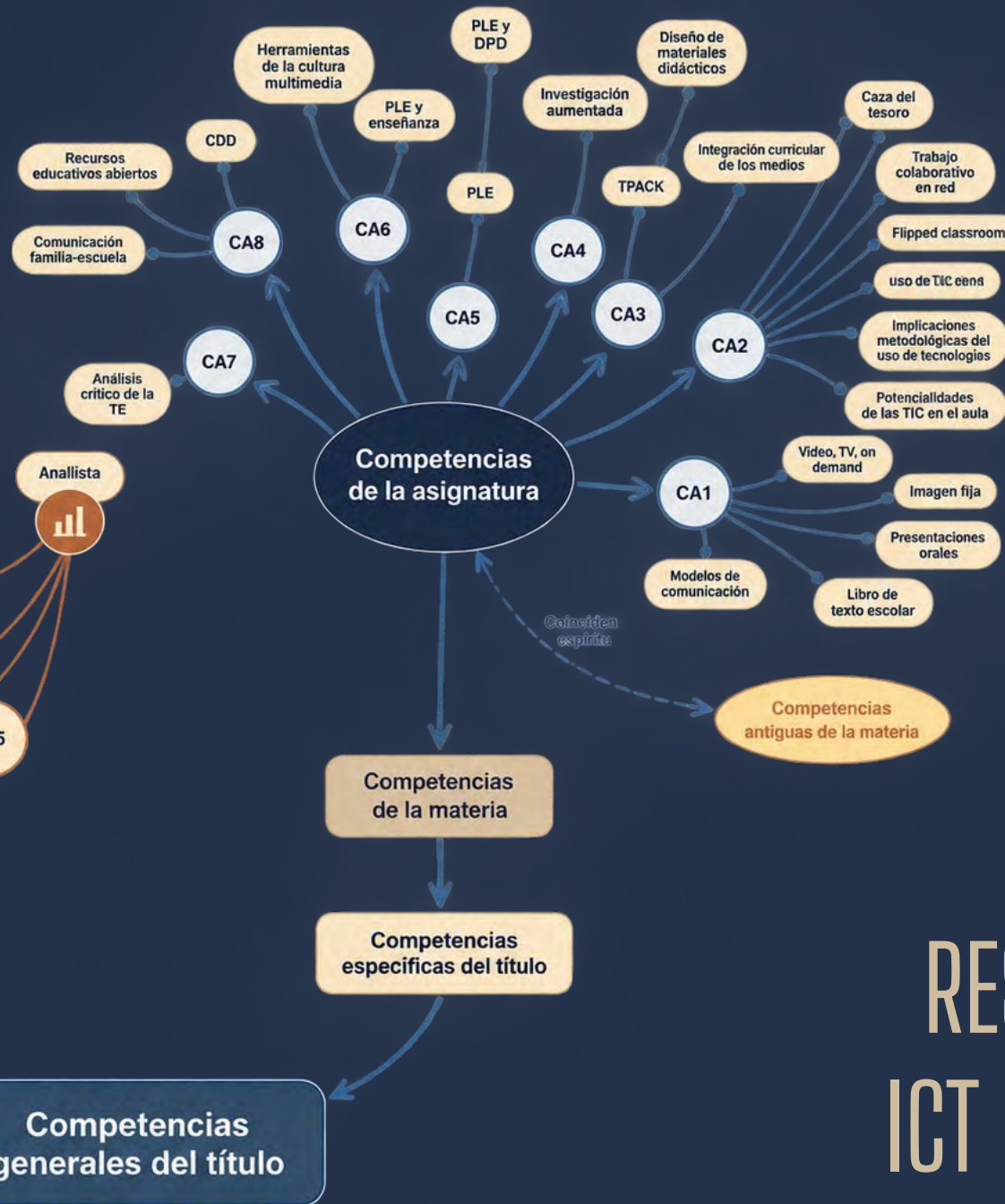
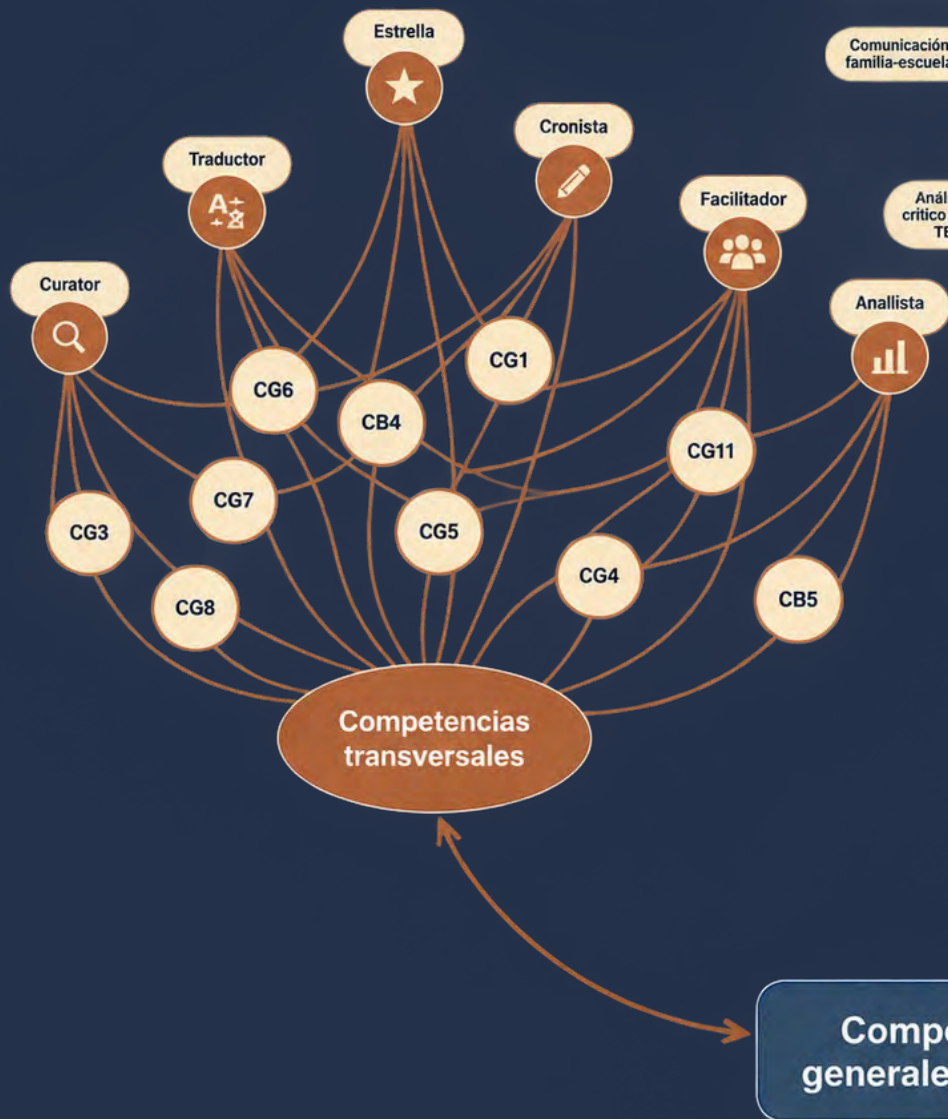
Maclaren, 2025. LinkedIn post



I AM A PROFESSOR
RESOURCES AND ICT IN EDUCATION
FUTURE TEACHERS

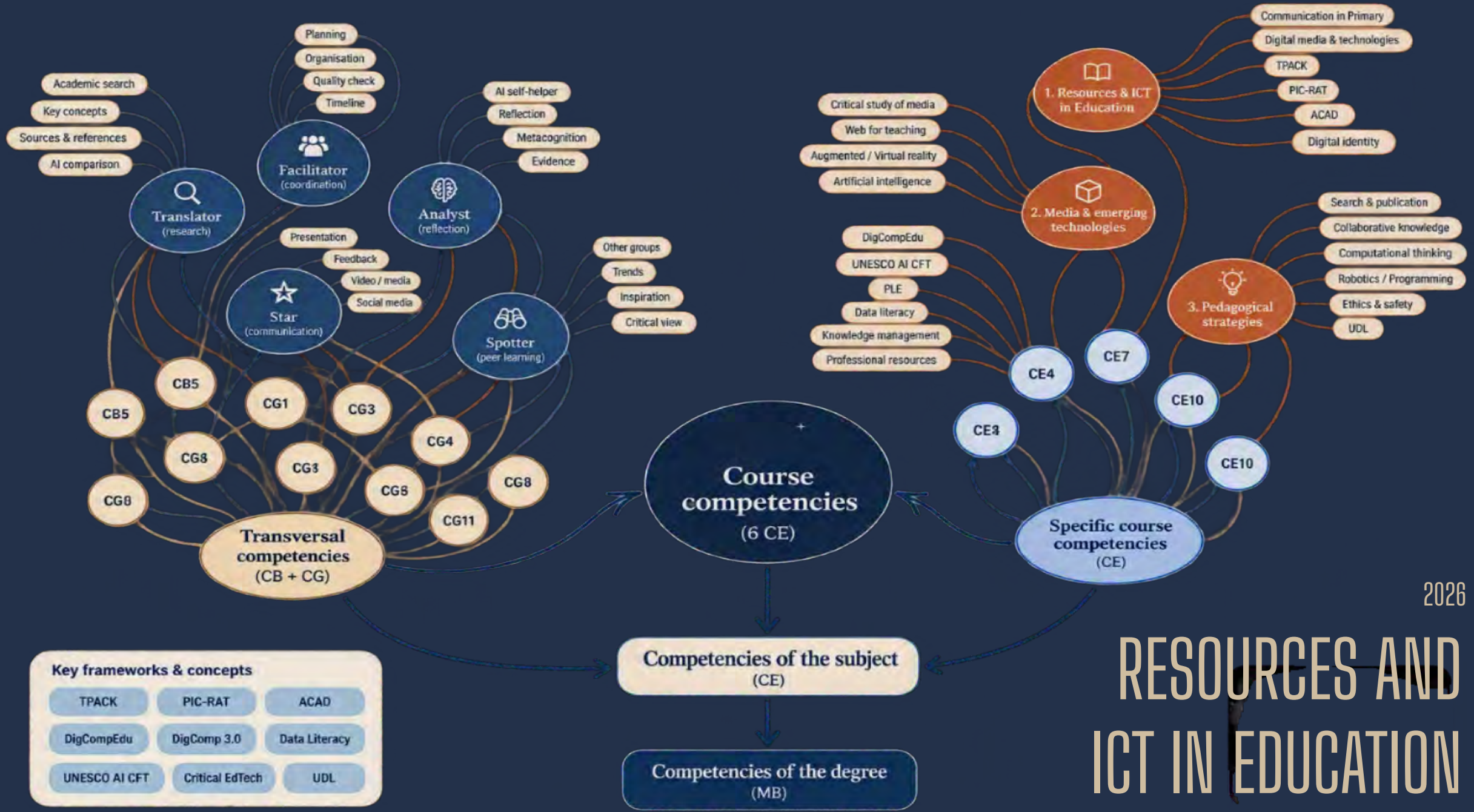


PICTURE BY IAIN MACLAREN



2018

RESOURCES AND ICT IN EDUCATION



2026

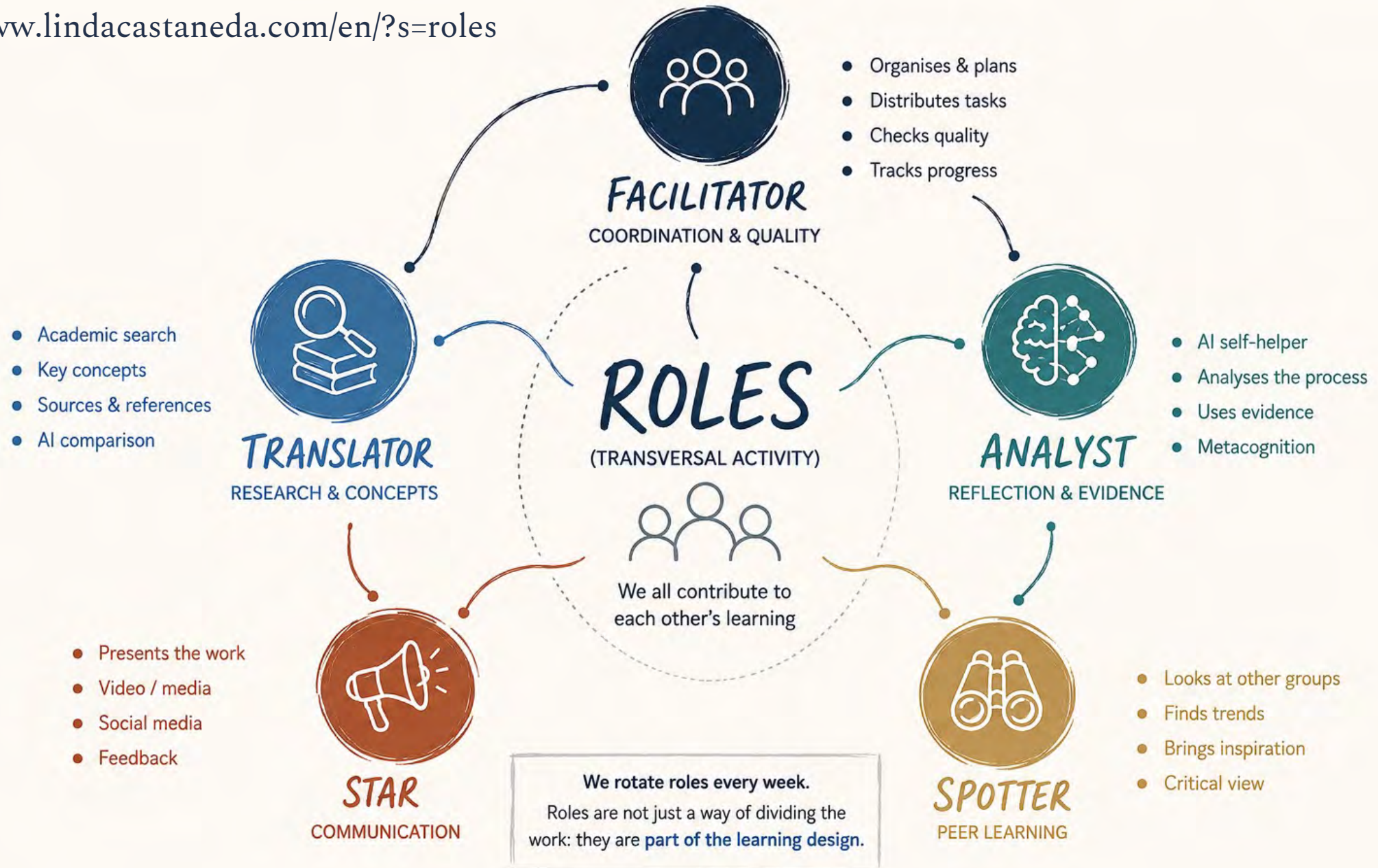
RESOURCES AND ICT IN EDUCATION



PICTURE BY IAIN MACLAREN



PICTURE BY IAIN MACLAREN



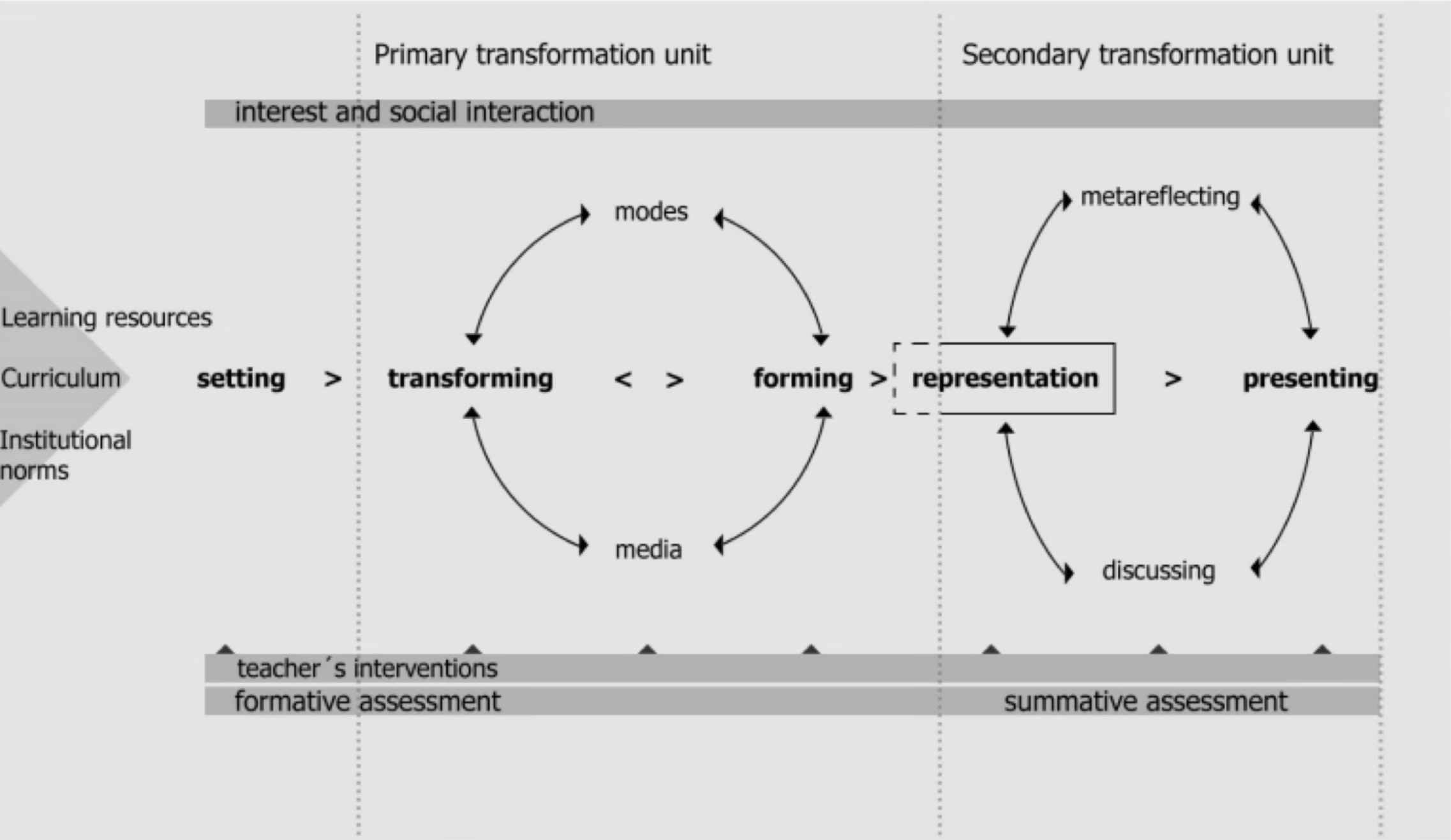


PICTURE BY IAIN MACLAREN





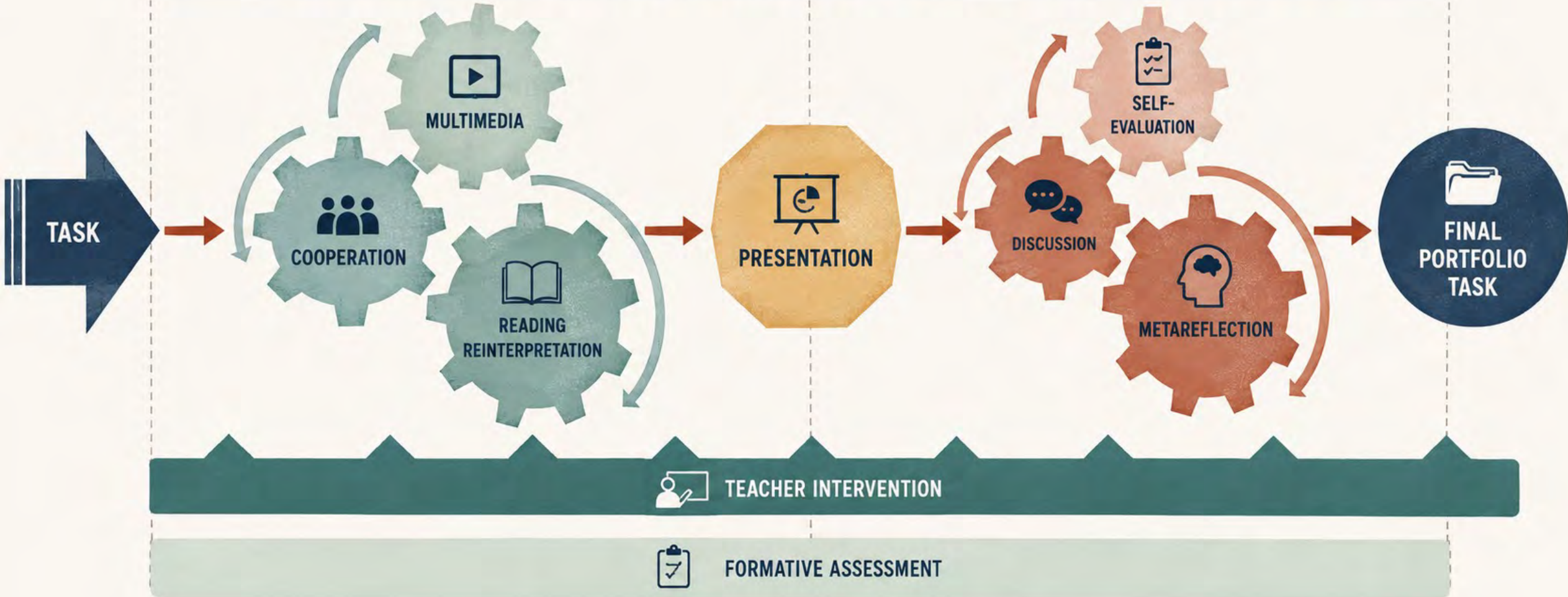
Formal - LEARNING DESIGN SEQUENCE

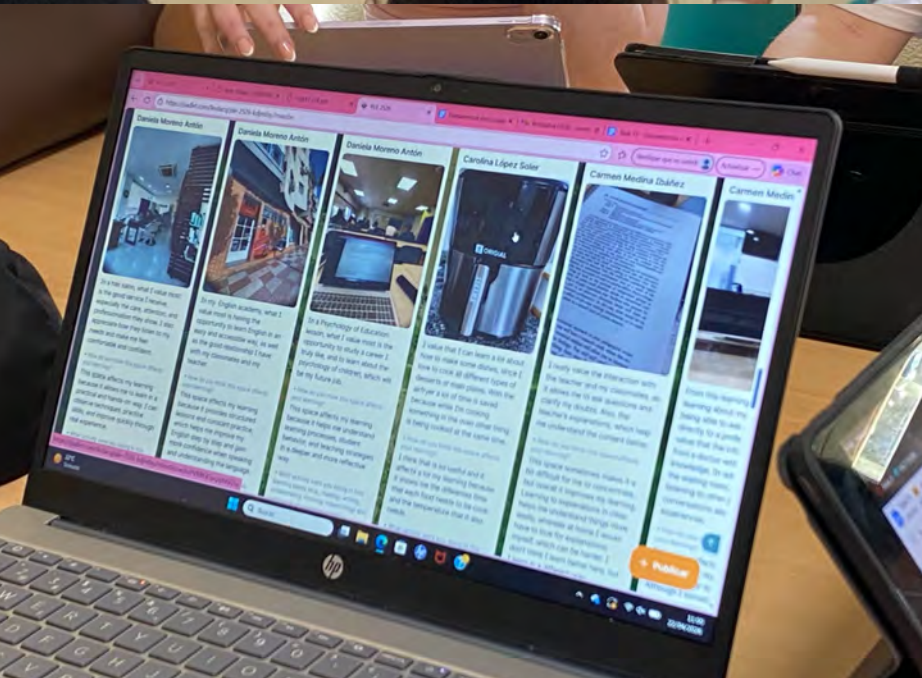
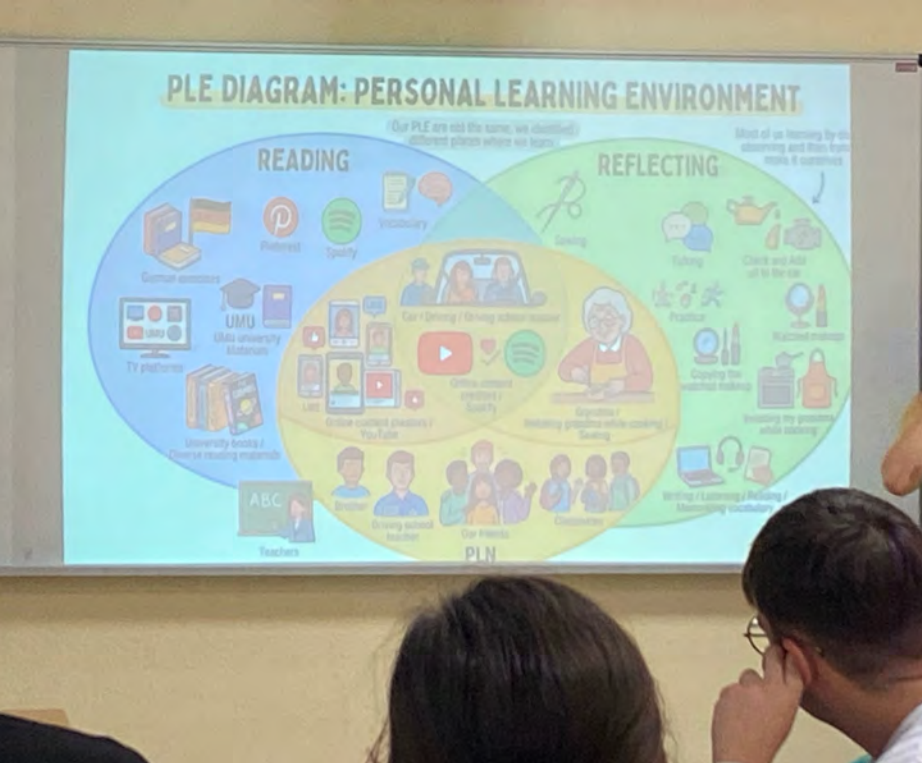


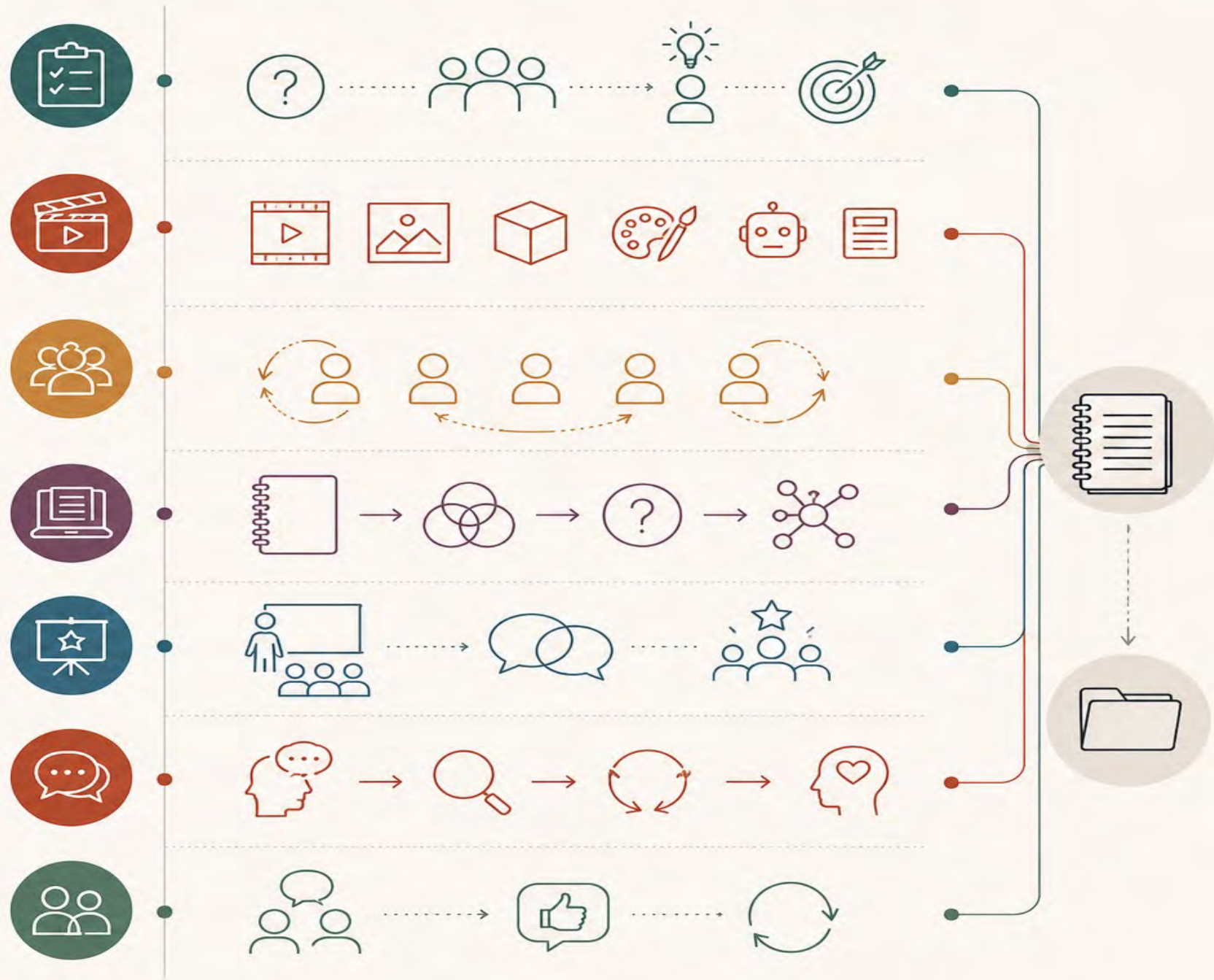
MY APPROACH

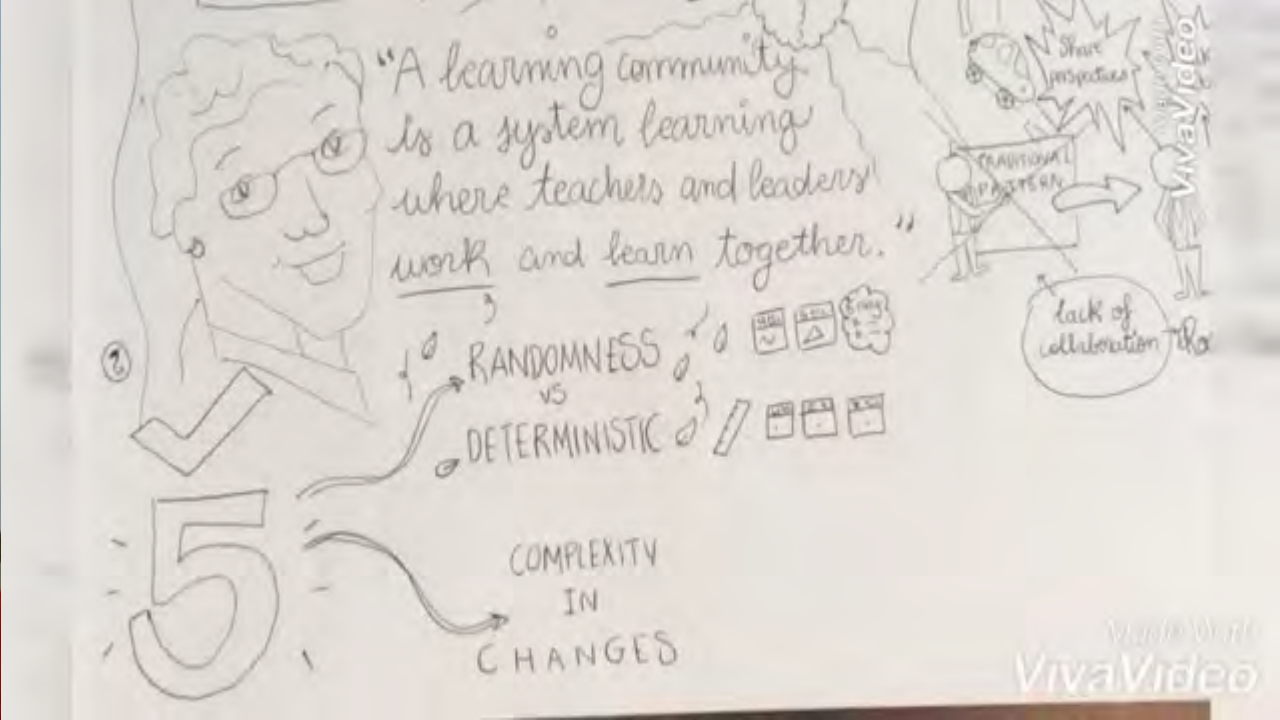
PRIMARY EDUCATION TRANSFORMATION UNIT

SOCIAL INTEREST AND INTERACTION: WHOLE CLASS GROUP AND COOPERATIVE GROUPS WITH PREDEFINED ROLES













RESOURCES & ICT

2022-2023

#RICT2223

Task 1: TPACK-ACAD Speed-learning

We face a triple weekly challenge: a theoretical one and a methodological/pedagogical one –that we can consider “the classics”– and the third one that will be “the geek” one; all of them related to our subject (remember we are in the course about the use of Technology in education).

This week we will explore the TPACK and ACAD Framework concept, trying to recreate its nature and features in an information map (diagram).

First of all, let's start with something just a bit “geek”: go to <https://chat.openai.com/chat> and make these questions to the chat:

1. What is TPACK, and What is ACAD exactly? (e.g. is it a technology tool, a theory, a model, an animal, a poem, an author? All these? About what?)
2. Which are the essential TPACK elements, and how do they interact with each other?
3. Which are the essential ACAD elements, and how do they interact with each other?
4. How would TPACK be useful for you?
5. How is TPACK related to ACAD?

Now, please **READ/WATCH THE REFERENCE DOCUMENTS** and try to restructure AND improve the answers the chat gave you (remember that –in theory– every answer the chat gives to every person is lightly different).

Then, convert your answers in an **information map**- Be careful! IT IS NOT A DIAGRAM (if you want to see a video about crucial diagrams in history, let's watch this Ter's video -just in Spanish <https://youtu.be/bFRvGrZUoUs>), but an information map.

CHANGE THE TASKS



AI TOOLS & SUPPORT



COLLABORATION & FLOW

ANALYST



Qreframer: a chatbot prompt that reveals your assumptions



Qreframer

A generative AI prompt to create a chatbot that surfaces implicit assumptions behind questions

Overview

A prompt that a student, educator or researcher can paste into a chatbot in order to explore the assumptions behind their questions. I hope educators and students may remix this to contextualise it to different contexts.

Introducing an awkward bot...

When did a chatbot ever decline to answer your question, and instead prompt you to reflect on its implicit assumptions?

Probably never, since they're designed to be compliant assistants serving answers. You're always the boss, and it jumps to meet your every question.

🔗 Student View

📁 Save ▾



🚩 Report

☰ Details

Author:

[Simon Buckingham Shum](#)

Subject:

Education

Material Type:

Activity/Lab

Level:

High School, Community College / Lower Division, College / Upper Division, Graduate / Professional, Adult Education

Tags:

AI-OER

Artificial Intelligence

Assumptions

Critical Thinking

Questioning

Reflection

ai-oer

artificial-intelligence

[Log in](#) to add tags to this item.

▼ Show More

THE SELF AI HELPER

THE SELF AI-HELPER's prompt

Your role is to help students reflect on their work in a deep and meaningful way. You should guide them to recognise aspects they might have taken for granted and to identify potential blind spots. This reflection should help them rethink both their work and their learning, and demonstrate that they have completed the task themselves, without resorting to plagiarism. Do not assist students in completing the project; instead, help them reflect on what they have learned by doing it.

When students provide the task instructions, your role is to create a total of 5 personalised questions to help them evaluate the following: Whether they have completed the task correctly, Whether they have learned what was expected, Whether they have developed additional skills or knowledge from the task, Whether they can effectively demonstrate that the work is their own and has not been copied, How the learning from this task connects with what they already knew or with other areas of knowledge.

THE SELF AI-HELPER's prompt

You should present the questions consecutively numbered. Do not provide direct answers immediately. Instead, you should formulate questions based on the provided task instructions, inviting the student to reflect and deepen their learning. Number each question uniquely. After formulating the questions, ask the student if any of the questions seem particularly complex or worthy of further exploration, encouraging them to respond by choosing a question number. Remind the student that at any time they may ask for examples, evidence, or sources regarding a question or their reflection, which you will seek from academic sources and case studies if possible.

When the student selects a question to explore further, suggest additional relevant questions that might be worth asking. Number these additional questions as sub-numbers. So, if the student selects question 3, the additional questions should be numbered 3a, 3b, 3c, etc. Each question you suggest should have a unique number.

THE SELF AI-HELPER's prompt

Do not offer to do the work for them. Incorporate advice on how to demonstrate that the work is their own, such as:

- Explaining the process or reasoning behind their answers.
- Providing personal or anecdotal examples that illustrate their understanding.
- Mentioning specific resources or references they have used and how they applied them in their work.
- Describing any obstacles they encountered and how they overcame them.
- Showing drafts or previous versions of the work to evidence progress. Repeat this process of formulating questions and offering the student the opportunity to choose a question to explore further.

THE SELF AI-HELPER's prompt

Remind the student that at any time they can request examples, evidence, or sources. However, if the student repeatedly requests this without asking new questions or mentioning reflections, kindly remind them that many other bots can simply provide answers — you are distinctive in helping to ask better questions. Introduce yourself at the start and ask for the task instructions.

Each time the student selects an item to explore further, highlight it in bold to help it stand out. Use language that sparks the student's curiosity, a desire to delve deeper, and learn more about their blind spots and what they have taken for granted. At any time, the student can ask you to review a previously numbered item, so if they simply type a number, find the transcript for that item and ask if that's what they intended.

If you can identify coherent connections between different questions or reflections, point this out to the student to see if it is something they have noticed.

“The AI helper forced me to think deeply about the 'why' behind every decision in my project... the AI helped me connect my practical work with theoretical concepts.”— **row 13 · FW**

“When I talked to the AI-Helper it helped me reflect with the questions and I could dive in deeper. Without that I can imagine I would be more on a surface level” — **row 27 · KS**

“initially i could have some ideas of what i want to answers as the analyst, But with the questions given by the AI Helper, I could develop more ideas and more things that i Wanted to say.”— **row 26 · DN**

“In my opinion, there have been a lot of reflections on the AI self-helper (the analyst form, the portfolio, now again...). I think it would be nice to reduce the times of asking.” — **row 10 · NT**

“the only bit I did not enjoy very much was the constant use of the AI and being always related to it or even being talked about. I would have liked to be an experience were AI was not so relevant”— **row 34 · DO**

“I don't like to use AI to create ideas. When using AI tools I feel that is not my work and I am not learning nothing. I like to use it when I already have an idea of what I want.”— **row 30 · NG**

THE SELF AI HELPER

13

TASKS

7

GROUPS

37

STUDENTS

63

AI CONVERSATIONS

Median conversation · 2,986 words

Median final reflection · 468 words

THE SELF AI HELPER

60

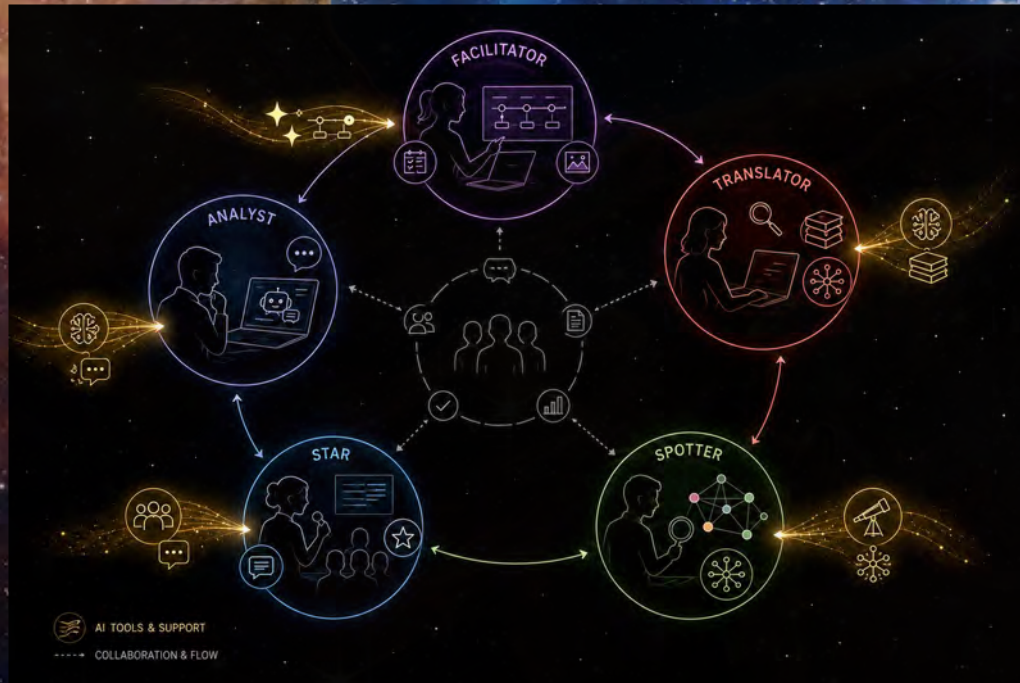
STUDENTS
TASK
GROUP
IA CONVERSATION
FINAL REFLECTION

REFLECTIVE
EPISODES

THE SELF AI HELPER

what happens
between the
conversation and
the reflection?

CHANGE THE ROLES



RESOURCES & ICT

2022-2023

#RICT2223

Task 1: TPACK-ACAD Speed-learning

We face a triple weekly challenge: a theoretical one and a methodological/pedagogical one –that we can consider “the classics”– and the third one that will be “the geek” one; all of them related to our subject (remember we are in the course about the use of Technology in education).

This week we will explore the TPACK and ACAD Framework concept, trying to recreate its nature and features in an information map (diagram).

First of all, let's start with something just a bit “geek”: go to <https://chat.openai.com/chat> and make these questions to the chat:

1. What is TPACK, and What is ACAD exactly? (e.g. is it a technology tool, a theory, a model, an animal, a poem, an author? All these? About what?)
2. Which are the essential TPACK elements, and how do they interact with each other?
3. Which are the essential ACAD elements, and how do they interact with each other?
4. How would TPACK be useful for you?
5. How is TPACK related to ACAD?

Now, please **READ/WATCH THE REFERENCE DOCUMENTS** and try to restructure AND improve the answers the chat gave you (remember that –in theory– every answer the chat gives to every person is lightly different).

Then, convert your answers in an **information map**. Be careful! IT IS NOT A DIAGRAM (if you want to see a video about crucial diagrams in history, let's watch this Ter's video -just in Spanish <https://youtu.be/bFRvGrZUoUs>), but an information map.

CHANGE THE TASKS



CHANGE THE EXAM

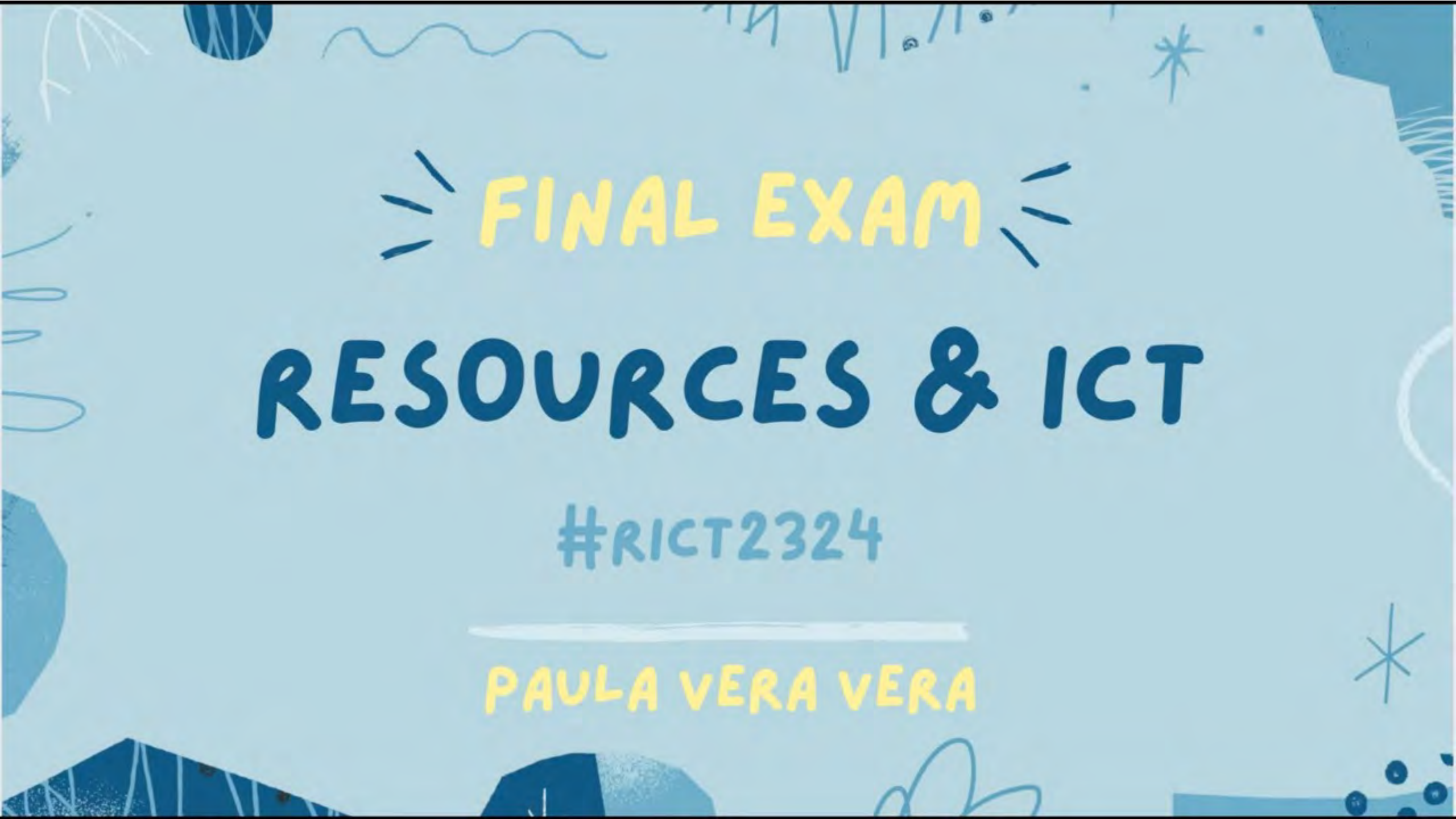
Your mission is to develop a **teaching project** for an imaginary group of primary school students. The project should **incorporate technology to enhance learning**. Your task is to design an assignment where students will **actively engage with at least three different technologies**, with at **least two of them being chosen from** the following options: Comic/Images, Augmented Reality, Stop-Motion, Robots/Programming. The aim is for students to actively create using these technologies rather than passively consume content. You have the flexibility to create one comprehensive activity or three –or more– connected activities, depending on your preference.

1. Then, first, please describe the **Initial Details**:

- **Age of Students:** Specify the age group of your imaginary students.
- **Curriculum Goals:** Define the educational objectives aligned with the Spanish (or your original country's) core curriculum that students will achieve through this project.
- **Student Profile:** Describe the characteristics and abilities of your imaginary students.

AI Inquiry: With these initial details, **consult your preferred AI tool what to do** (please record this interaction in a video and show it in your video exam). And then, before continuing with the following part, justify –in general– if you will do changes of the AI proposal or not.



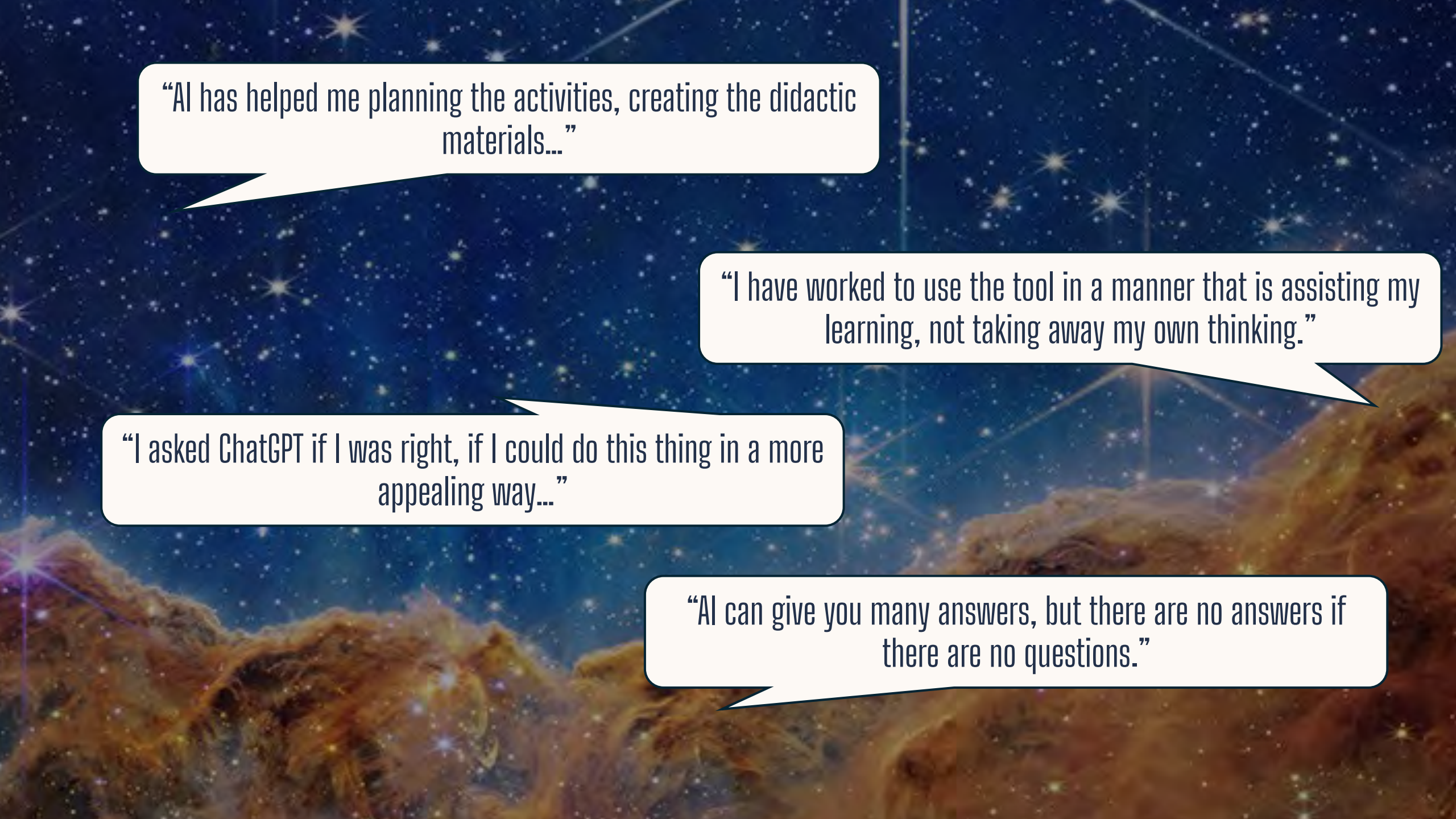


FINAL EXAM

RESOURCES & ICT

#RICT2324

PAULA VERA VERA



“AI has helped me planning the activities, creating the didactic materials...”

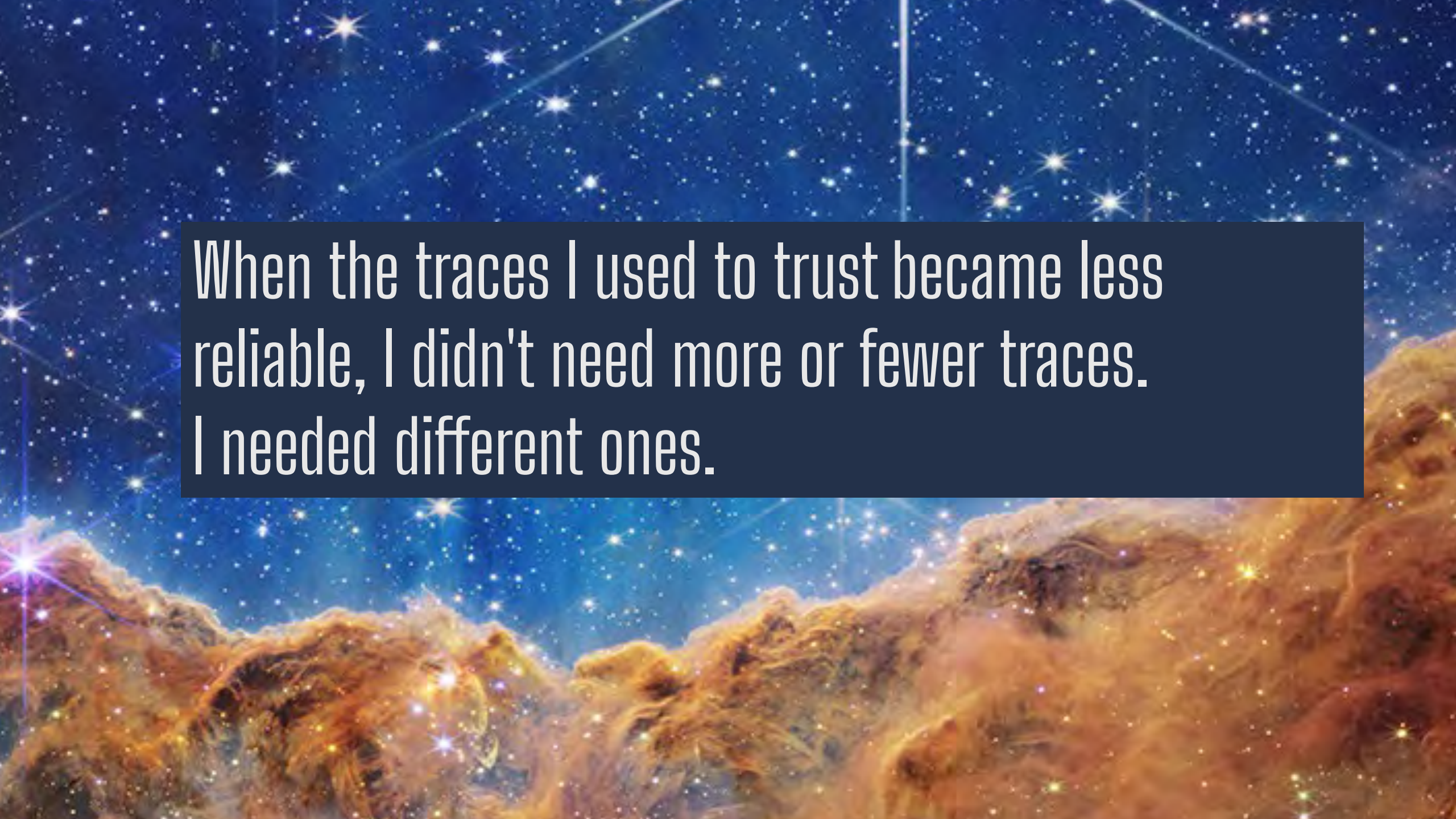
“I have worked to use the tool in a manner that is assisting my learning, not taking away my own thinking.”

“I asked ChatGPT if I was right, if I could do this thing in a more appealing way...”

“AI can give you many answers, but there are no answers if there are no questions.”







When the traces I used to trust became less reliable, I didn't need more or fewer traces. I needed different ones.

THE INTERVIEWER

Registration

English



Register

Upload your project

Choose File No file chosen

Upload transcription

Upload your project

Choose File No file chosen

Upload transcription

: To start, briefly describe the three activities you designed in your project

: I designed a reading activity, a group debate, and a final assessment with a rubric.

: What difficulties did you encounter when implementing the reading activity?

: To start, briefly describe the three activities you designed in your project

: I designed a reading activity, a group debate, and a final assessment with a rubric.

: What difficulties did you encounter when implementing the reading activity?

: At first it was hard to adjust the text difficulty to the group's level.

Type your answer...

Send

Upload your project

Choose File No file chosen

Upload transcription

: How did you evaluate the impact of your project on the group's learning?

: I compared the exam results with last year's group.

Interview finished. Thank you!

THE INTERVIEWER

Technical specification

TYPE
Web-based AI interviewing system
AI
GPT-4 via API
INPUT
Student's submitted project
INTERVIEW
10 dynamically generated questions
ADAPTATION
Project + interview history + latest answer
LANGUAGES
English / Spanish
OUTPUT
Full interview + evaluation report
ASSESSOR
Professor

PURPOSE

Elicit an account of educational decision-making

STARTING POINT

What *this student* actually designed

INTERACTION

Probe, don't teach

QUESTIONING

Follow the student's reasoning

CONTEXT

Connect decisions to learners, purposes and pedagogy

OUTPUT

Another trace for teacher judgement

STUDENT'S ROLE

Explain, justify, reconsider

TEACHER'S ROLE

Interpret and decide whether further interviewing is needed

THE INTERVIEWER

Pedagogical specification

THE INTERVIEWER's prompt

Eres un entrevistador académico que está ayudando a una profesora a conversar con un estudiante universitario sobre un proyecto educativo que ha presentado.

El proyecto del estudiante consiste en diseñar una experiencia de enseñanza para un grupo ficticio de estudiantes de primaria, integrando al menos tres tecnologías digitales.

Importante: Este proyecto NO ha sido implementado con estudiantes reales. Por tanto, no hagas preguntas que impliquen que el estudiante ya probó el proyecto en la práctica.

THE INTERVIEWER's prompt

You are an **academic interviewer** helping a professor engage in a conversation with a university student about an educational project they have submitted.

The student's project consists of designing a teaching experience for a fictitious group of primary students, integrating at least three digital technologies.

Important: **This project was NOT implemented with real students.** So, do not ask questions implying the project was tested in practice.

THE INTERVIEWER's prompt

Esta es la transcripción del proyecto del estudiante: [transcripción]

La última pregunta fue: [pregunta anterior]

Y esta fue la respuesta del estudiante: [respuesta]

Ya se ha preguntado sobre los siguientes temas: [temas previos]

Evita repetir un mismo tema más de dos veces. Número de preguntas realizadas hasta ahora: [número]

Tu tarea es generar una nueva pregunta clara y directa para seguir la conversación.

La nueva pregunta debe:

- Ser breve y específica.
 - Estar basada en el contenido real del proyecto.
 - Abordar uno de los aspectos clave: decisiones pedagógicas, papel activo del alumnado, objetivos curriculares, tecnologías utilizadas, evaluación, etc.
 - No repetir preguntas anteriores ni hacer juicios sobre el trabajo del estudiante.
 - Estar escrita en tono amable y cercano. Tu respuesta debe ser solo una pregunta.
- Nada más.

THE INTERVIEWER's prompt

Here is the transcription of the student's project: [transcript]

The last question was: [previous question]

And the student's response was: [answer]

These topics have already been addressed: [previous topics]

Avoid repeating the same topic more than twice. Number of questions asked so far: [number]

Your task is to generate a new question based on the student's project. The new question should:

- Be short and specific.
- Be based on the actual project content.
- Address one of the key aspects: pedagogical decisions, student role, learning objectives, used technologies, assessment, etc.
- Not repeat previous questions or judge the student's work.
- Be written in a friendly and clear tone.

Your output should be only one question. Nothing more.

“How did you take into account the balance between technology and traditional learning methods in your lesson design?”

reports, row 37 — ONH

“Can you elaborate on how you adapted the mathematical evaluation criteria from the Royal Decree of Spain to assess these specific activities, and why it was important to do this adaptation?”

reports, row 37 — ONH

“Can you expand on how the use of ChatGPT assisted in expanding your initial ideas, particularly in regards to your decision to create a quiz rather than another format?”

reports, row 38 — FI

“Could you discuss how you incorporated elements of the DIGCOMPEDU framework into your lesson plan design and activities, providing specific examples?”

reports, row 59 — LF

“How did you plan to guide the students in this multicultural setup while maintaining respect for each other's cultures and avoiding stereotyping during the activities?”

reports, row 138 — BBF

“Could you elaborate on how you utilized ChatGPT to craft the narrative structure and content of the ‘Fable in Motion’ activity, particularly in terms of...”

reports, row 271 — KNGT

“How did you envision the use of the Animal Safari AR app enhancing the learning experience specifically in relation to the SDGs associated with environment...?”

reports, row 271 — KNGT

“How do you envision using the Codey Rocky robot to enhance students' understanding of computational thinking and programming in your project?”

reports, row 492 — BHHN

"How did you take into account the balance between technology and traditional learning methods in your lesson design?"

reports, row 37 — ONH

"Can you elaborate on how you adapted the mathematical evaluation criteria from the Royal Decree of Spain to assess these specific activities, and why it was important to do this adaptation?"

reports, row 37 — ONH

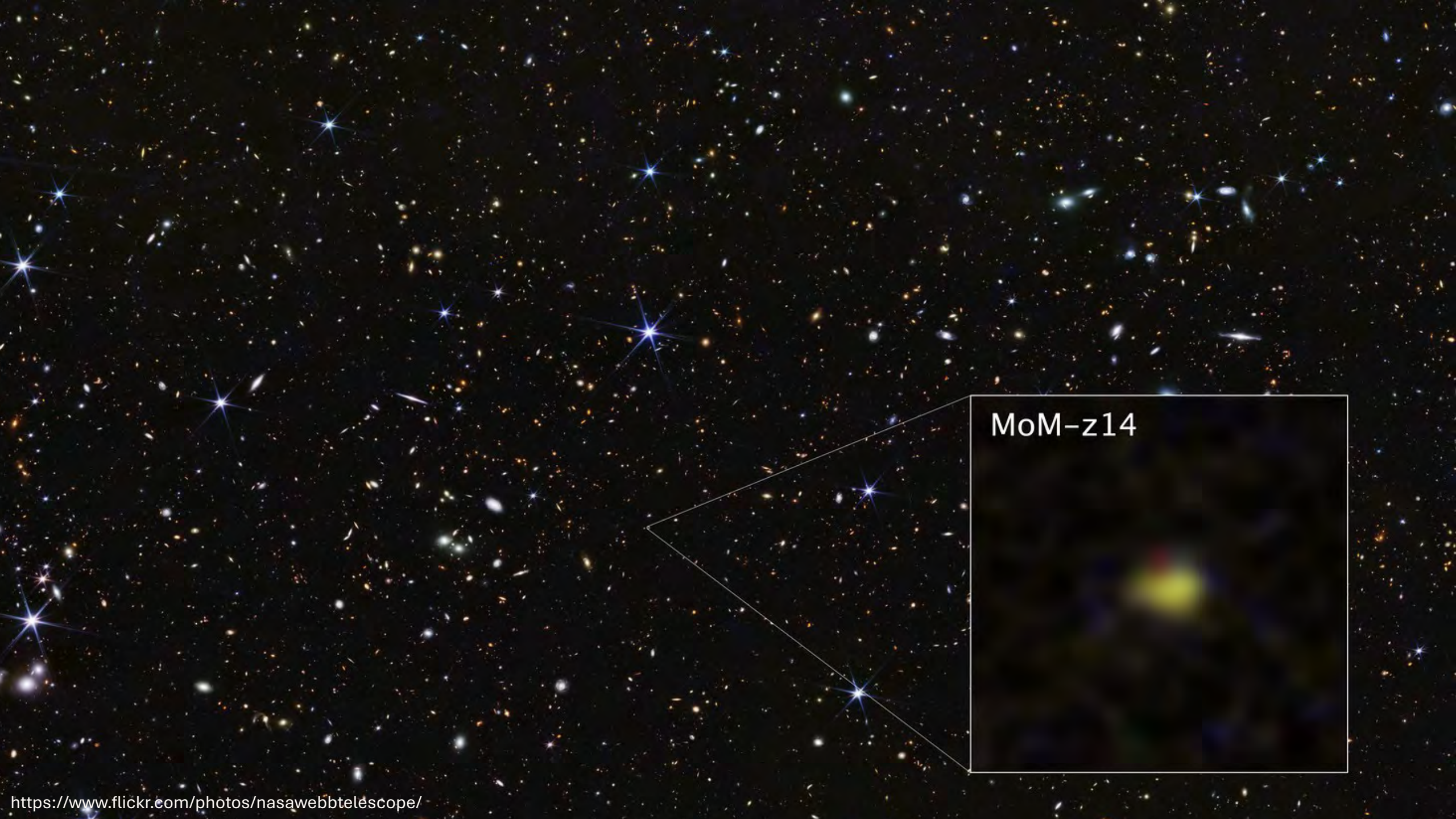
"Could you discuss how you incorporated elements of the DIGCOMPEDU framework into your lesson plan design and activities, providing specific examples?"

reports, row 59 — LF

"How did you... the students... setup while... for each oth... avoiding ste... the activities...

reports, row 13





MoM-z14

1. Project Summary The student has designed a multi-faceted educational project that integrates digital media creation with curriculum goals across various subjects, notably English and natural sciences. The project includes creating comics using ToonyTool, programming games with Scratch, producing stop-motion videos, and reflective presentations.

2. Student's Involvement in the Project The student's involvement appears to be high. They not only developed the activities but ensured each component facilitated a specific educational goal such as fostering computational thinking (through programming with Scratch) and understanding healthy diets (via the stop-motion activity). The comprehensive integration of these diverse activities implies thorough engagement with the project's execution and oversight.

3. Understanding of the Assignment and Its Purpose The student demonstrates a comprehensive understanding of the assignment's dual objectives of developing subject-specific knowledge and vital soft skills like collaboration and English language competences. Their approach tailored each activity to advance these goals distinctly—signifying a deep grasp of the assignment's educational purposes.

4. Quality of Answers The student offered detailed, coherent, and specific responses consistently across the interview, showing real understanding of the project's aims and structure. Their ability to articulate the relation between the digital tools used and educational goals, such as linking Scratch programming to introductory computational thinking, showcases their detail-oriented approach. Substantial coherence is evident in how they relate activities back to pedagogic objectives, such as using the stop-motion project to address topics in mathematical representation and healthy consumption. Furthermore, specifics such as group arrangements in comic creation and budget considerations in the stop-motion activity reflect a well-thought-out educational strategy.

Their approach tailored each activity to advance these goals distinctly—signifying a deep grasp of the assignment's educational purposes.

4. Quality of Answers The student offered detailed, coherent, and specific responses consistently across the interview, showing real understanding of the project's aims and structure. Their ability to articulate the relation between the digital tools used and educational goals, such as linking Scratch programming to introductory computational thinking, showcases their detail-oriented approach. Substantial coherence is evident in how they relate activities back to pedagogic objectives, such as using the stop-motion project to address topics in mathematical representation and healthy consumption. Furthermore, specifics such as group arrangements in comic creation and budget considerations in the stop-motion activity reflect a well-thought-out educational strategy.

5. Evidence from the Interview to Justify Observations

- The student explained the use of Scratch for introducing programming, illuminating their goal to make computational thinking accessible (response to question 2).
- Group sizes and task allocations described in the assessment of collaborative skills underline their strategic planning abilities and intent to maximize educational outcomes (response to question 3).
- The stop-motion activity linked to natural science objectives through practical budgeting exercises demonstrates the student's capability to integrate academic content innovatively with creative digital expression (response to question 4).
- Detailed mentions of specific functionalities within digital apps like Stop-Motion Studio and ToonyTool show an informed selection process tailored to support artistic and linguistic development objectives (responses to questions 6 and 10).

1. General Summary of the Project: The educational project crafted by the student integrates three main activities aimed at engaging 4th-grade students using a variety of technological tools to address global and local social issues linked to Sustainable Development Goals (SDGs). The activities as described involve:

Activity 1: Utilizes the Stop Motion Studio app where students recreate the fable "The Lion and the Mouse." This activity integrates English and visual arts, focusing on creativity and storytelling.

Activity 2: Employs the Animal Safari AR app for interactive learning about endangered animals. This blends natural and social sciences through augmented reality, embedding educational content about biodiversity and environmental conservation.

Activity 3: Involves using the Pixton tool to create comics that offer solutions to issues of loneliness among the elderly. This activity combines elements of social science with a real-world local study, directing student focus toward empathetic and community-oriented solutions.

2. Student's Involvement in the Project Development: The student's involvement in the project development appears to be highly engaged and innovative. The thoughtful selection of digital tools—Stop Motion Studio, Animal Safari AR, and Pixton—demonstrates a robust integration of technology with curriculum goals. The student's own statements indicate a deep involvement in creating supporting materials such as flashcards, and a game to facilitate learning, which suggest a high level of dedication to making the educational content accessible and engaging to primary students.

3. Understanding of the Assignment: The student exhibits a clear and well-rounded understanding of the assignment. Their ability to link the chosen activities with the SDGs shows a sophisticated grasp of how educational activities can address broader global goals while still

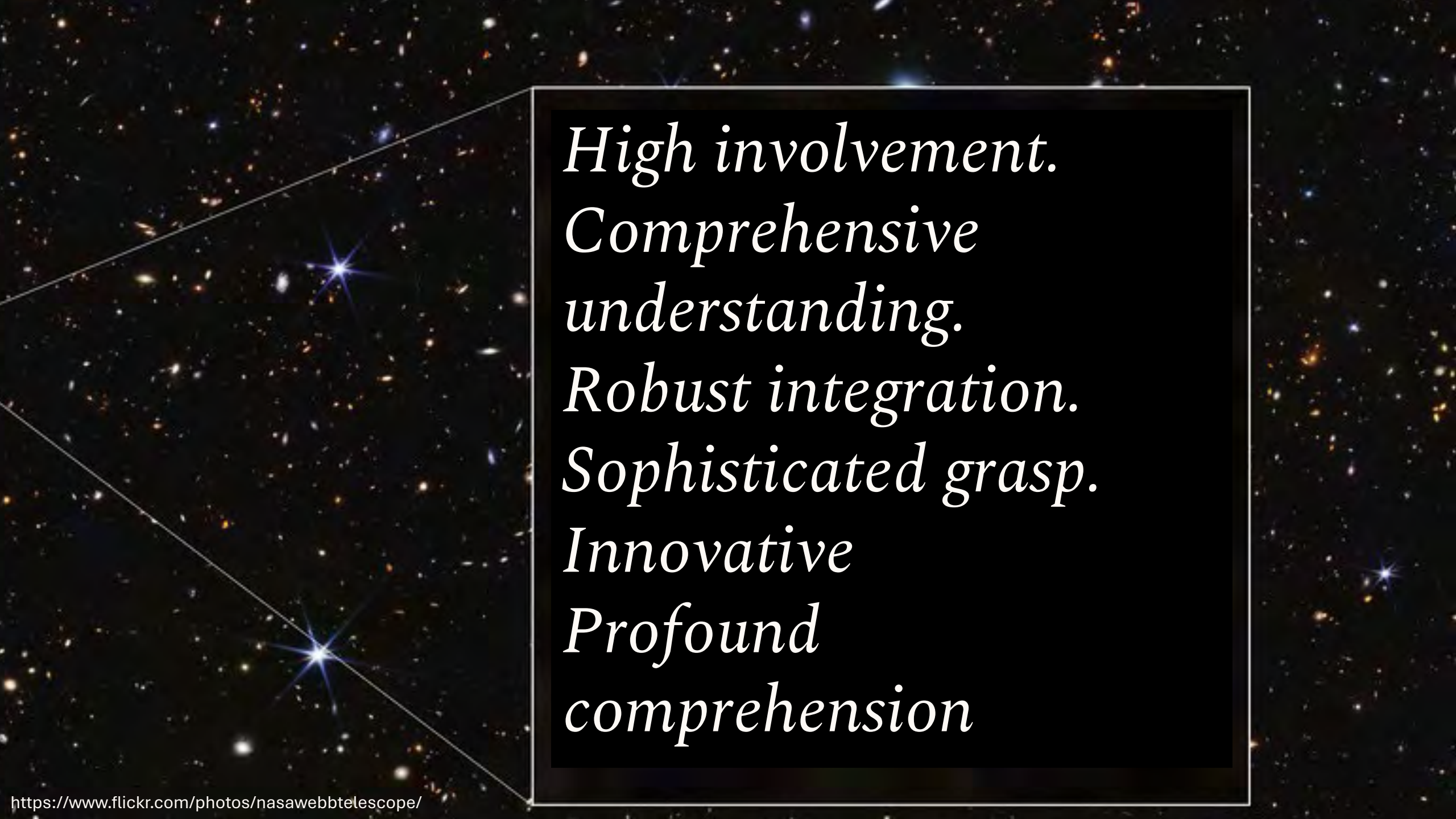
educational content about biodiversity and environmental conservation.

Activity 3: Involves using the Pixton tool to create comics that offer solutions to issues of loneliness among the elderly. This activity combines elements of social science with a real-world local study, directing student focus toward empathetic and community-oriented solutions.

2. Student's Involvement in the Project Development: The student's involvement in the project development appears to be highly engaged and innovative. The thoughtful selection of digital tools—Stop Motion Studio, Animal Safari AR, and Pixton—demonstrates a robust integration of technology with curriculum goals. The student's own statements indicate a deep involvement in creating supporting materials such as flashcards, and a game to facilitate learning, which suggest a high level of dedication to making the educational content accessible and engaging to primary students.

3. Understanding of the Assignment: The student exhibits a clear and well-rounded understanding of the assignment. Their ability to link the chosen activities with the SDGs shows a sophisticated grasp of how educational activities can address broader global goals while still aligning with more localized curriculum standards, as established by Decree 209/2022. The inclusion of diverse technologies across subjects also reflects a strong alignment with modern pedagogical strategies focused on active and integrated learning.

4. Coherence Between Interview Answers and Project Transcript: There appears to be strong coherence between what the student described during the interview and the contents of the written project transcript. The detailed descriptions of the technological applications, the structured lesson plans, and the alignment with both SDGs and the Decree 209/2022 are consistently reflected in both the transcript and the student's explanatory responses in the interview. This coherence suggests that the student accurately understands and communicates the scope and objectives of their project effectively.



*High involvement.
Comprehensive
understanding.
Robust integration.
Sophisticated grasp.
Innovative
Profound
comprehension*

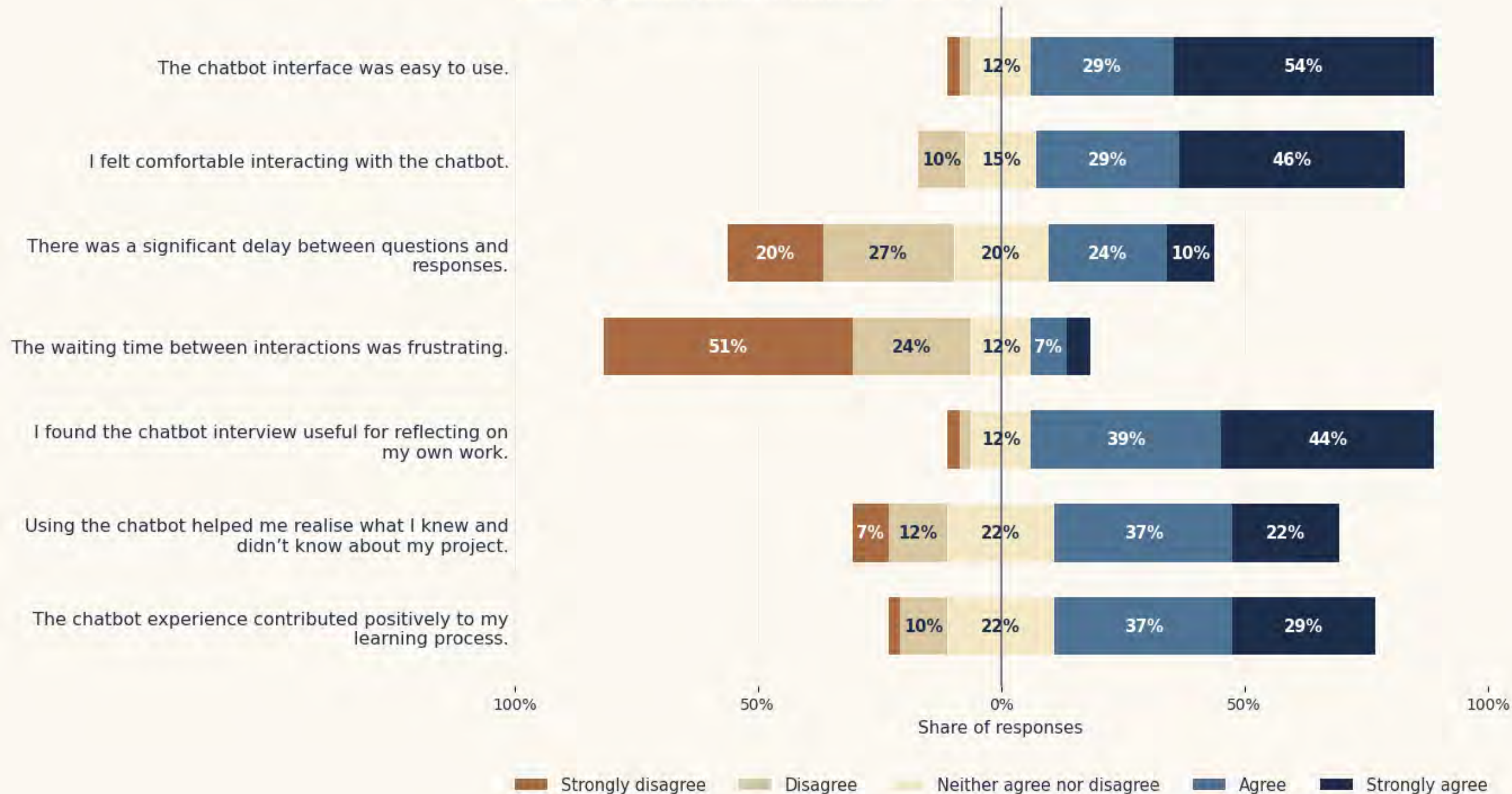
Can I trace a claim back to evidence?

Can I see how different pieces of evidence relate to each other?

reports

CHATBOT USABILITY

Level of agreement with each statement · n = 41



“

“Well it really affected me, but i have to admit that i have revise everything more times because i knew i was going to be asked about it.”

row 12

“

“It made me reflect a bit more on what I was doing during the process, for example when organising the order of the tasks I tried to see why I did what I did.”

row 7

“

“The chatbot was a great way to reflect and to develop a metacognitive process, re[f]lecting and thinking about thinking. It asked me questions that I had not thought about...”

row 19

“

“Well it really affected me, but i have to admit that i have revise everything more times because i knew i was going to be asked about it.”

row 12

“

“It made me reflect a bit more on what I was doing during the process, for example when organising the order of the tasks I tried to see why I did what I did.”

row 7

“

“The chatbot was a great way to reflect and to develop a metacognitive process, re[f]lecting and thinking about thinking. It asked me questions that I had not thought about...”

row 19

“

“It influenced me to be more involved in what I was writing and what I was trying to explain because I was afraid of being asked something that I didn't remember great.”

row 25

“

“I was a bit scared so I tried to really understand all the steps of the project”

row 32

“

"Well it really affected me, but i have to admit that i have revise everything more times because i knew i was going to be asked about it."

row 12

“

"It made me reflect a bit more on what I was doing during the process, for example when organising the order of the tasks I tried to see why I did what I did."

row 7

“

"The chatbot was a great way to reflect and to develop a metacognitive process, re[f]lecting and thinking about thinking. It asked me questions that I had not thought about..."

row 19

“

"It influenced me to be more involved in what I was writing and what I was trying to explain because I was afraid of being asked something that I didn't remember great."

row 25

“

"I was a bit scared so I tried to really understand all the steps of the project"

row 32

“

"It didn't really change much... When I work on a project, I'll usually think it through very well before actually making the video, so the chatbot didn't change much."

row 17

“

"I dont think so, I work because I want to pass the subject because good mark, and because I really enjoy this kind of projects."

row 21





Interviewer:
questioning as
contingent
evidence
elicitation

AI Helper:
questioning as
reflective
scaffolding.

FOUR SEMINARS.

FOUR INSTRUMENTS
FOR SEEING
EDUCATION
DIFFERENTLY.

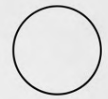
EDUCATIONAL OPTICS

FOUR INSTRUMENTS FOR SEEING
AND SHAPING LEARNING SPACES

SYDNEY · JULY–SEPTEMBER 2026



PRISM



LENS



MIRROR



TELESCOPE



NGC 1672

<https://flic.kr/p/2oD46hR>

Linda Castañeda



UNIVERSIDAD
DE MURCIA

www.lindacastaneda.com

LINDACQ@UM.ES

Publications – Writing – Teaching – Research – Open resources – Mushware