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Teacher Academy

AI-CLIL Integration Handbook

A practical guide for VET and subject teachers

Using artificial intelligence to support Content and Language Integrated Learning

Tested in classrooms

Written for teachers

Openly licensed



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Enriching lives, opening minds.



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ENGLISH EDITION | VERSION 1.0 | JULY 2026

Erasmus+ KA210-VET | 2024-1-IE01-KA210-VET-000252978

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About This Project

Empowering Teachers with AI: A CLIL Integration Project (AI-CLIL-ET) is an Erasmus+ KA210-VET partnership between Teacher Academy Ireland Limited in Dublin and the Alessandro Volta Institute in Perugia. The project runs from September 2024 to August 2026.

It responds to a practical classroom challenge: teachers are increasingly expected to teach demanding technical content to students with different levels of proficiency in the language of instruction. The project developed two connected resources: an AI-supported CLIL platform and this practical teacher handbook.

The platform was tested in vocational and technical classrooms through lessons on programming, databases, computer networks, web development, and artificial intelligence. Teacher reports, classroom observations, and student feedback informed the guidance and case studies in this handbook.

Project commitments and handbook response

The approved project connected innovation in vocational education with flexible language support, inclusive practice, and responsible use of AI and data. The table below makes that connection visible in the handbook itself.

Application focus	Handbook response	Evidence in this edition
Innovation in VET	Teacher-tested AI tools for technical and vocational subjects.	Platform guide and nine classroom case studies, Parts Four and Six
Flexible VET opportunities	Parallel CEFR versions, reusable resources, class profiles, and differentiated support.	Parts Four, Five, and Seven
Comprehensive language learning	CLIL planning, language objectives, scaffolds, and dual-focus assessment.	Parts Two, Five, Seven, and Eight
Inclusion of migrant and multilingual learners	Access without lowering subject expectations, strategic multilingual support, and non-deficit guidance.	Parts Two and Five
AI and data use	Human review, privacy, copyright, bias, transparency, and link checking.	Part Three and the teacher-review checks throughout

Who This Handbook Is For

This handbook is primarily for VET educators, subject teachers, CLIL teachers, and teacher trainers. The project application also identified non-native speakers, migrant learners, and students studying technical subjects through an additional language as a central beneficiary group. The practical aim is access to demanding content, not a lower level of content.



The project team in Perugia during the Phase 3 classroom visit, November 2025.

How the project was developed

The platform was built in short cycles. Classroom feedback changed both the tool and the guidance in this handbook.

When	Milestone	What it added
Sep-Nov 2024	Needs analysis and Dublin kickoff	Teachers defined CLIL problems, desired activities, learner profiles, and success criteria.
Dec 2024-Jan 2025	Language Tools pilot	Volta classes tested CEFR adaptation and comparison of original and adapted texts.
2025	Activity and lesson generation	Features were added and revised through teacher trials and sprint reviews.
10-13 Nov 2025	Phase 3 classroom shadowing	Three teaching approaches were observed in Perugia and further changes were logged.
Spring 2026	Extended classroom use and student feedback	Later pilots, implementation lessons, and the follow-up learning-experience survey informed the final handbook.

How Teacher Feedback Shaped the Platform

The platform was developed through a simple cycle: teachers identified a classroom need, the development team built or adjusted a feature, teachers tested it, and the next version responded to their feedback. Several of the final features came directly from this process.

Teachers identified a need for	The platform developed
Materials at different language levels	CEFR-based text adaptation in Language Tools
Easy comparison of source and adapted texts	Side-by-side Original and Adapted views

Teachers identified a need for	The platform developed
More control over AI output	Editable content and section-by-section customisation
Support for difficult technical vocabulary	Difficult-word highlighting, explanations, and language objectives
More varied classroom activities	Activity Types and structured Learning Tasks
Better organisation of reusable material	Saved lessons, Resources, folders, and class profiles

Classroom testing changed the tool. Teachers identified practical needs, tried the response, and showed where another revision was necessary.

Evidence used and limits

This edition draws on five source groups:

- the approved project application and project priorities;
- teacher plans, reports, reflections, and sprint feedback;
- classroom observations and photographs from the pilot phases;
- platform screenshots reviewed in July 2026; and
- student learning-experience surveys with 131 pre-project respondents and 59 follow-up respondents.

These sources provide useful practice evidence, not a controlled impact evaluation. The two student surveys used independent groups, the case studies were written in real teaching conditions, and platform features may change after publication. Claims in the handbook are therefore framed as observations, reported experiences, or planning guidance rather than proof of causal impact.

Dissemination and reach

The project was shared beyond the partner schools throughout its development. The events below form part of the project record; supporting programmes, photographs, and attendance evidence should remain in the project archive.

Date	Event	Project contribution
Dec 2024	Università per Stranieri di Perugia	Early public presentation of the platform and language-adaptation work.
Mar 2025	Didacta Italia, Florence	Teacher- and student-facing dissemination at the Ministry of Education and Merit stand.
Apr 2025	Erasmus+ KA2 Networking Event, Limerick	Project poster and exchange with other Erasmus+ partnerships.
Apr 2025	World CLIL Conference, Maynooth University	Presentation to the international CLIL practitioner and research community.
Jan 2026	AI Forward Winter School, Perugia	Presentation focused on meaning-making, inclusion, critical thinking, and responsible use.

Part One: Introduction

Foreword

Teaching through an additional language does not require lowering the intellectual level of the subject. It requires making language demands visible and providing students with the support needed to participate. AI can help teachers prepare some of that support more quickly, but it cannot decide whether the material is accurate, appropriate, or useful for a particular class. That responsibility remains with the teacher.

The most effective use of AI in CLIL is therefore modest and practical: adapt one difficult text, identify essential vocabulary, create a few sentence frames, or draft a task that the teacher then improves.

How to Use This Handbook

This handbook is designed for dipping into, not reading cover to cover. New to CLIL? Begin with Part Two. Ready to use the platform? Go to Part Four. Planning tomorrow's lesson? Use the strategies and printable toolkit. Looking for classroom examples? Go directly to the case studies. Experiencing a technical problem? Use Known Issues and Workarounds.

Why CLIL and AI Matter Together

CLIL addresses a practical classroom challenge: how to support meaningful subject learning through an additional language. AI can help teachers adapt input, prepare vocabulary support, generate scaffolds, and draft activities more quickly. The value comes from combining that speed with professional judgement, subject expertise, and knowledge of the students.

Part Two: CLIL Essentials

What CLIL Is

CLIL stands for Content and Language Integrated Learning. It means learning subject content through an additional language while deliberately supporting the language students need. A computer science teacher, for example, may teach network topologies in English while using diagrams, key vocabulary, sentence frames, and structured discussion. Students learn the technical content and develop the language needed to explain it. CLIL is not simply translating a normal lesson or adding a vocabulary list at the end.

The Four Cs of CLIL

The Four Cs help teachers connect Content, Communication, Cognition, and Culture. Use them as four planning questions rather than as abstract theory.

C	Teacher question	Example
Content	What subject knowledge or skill will students develop?	Identify and compare network topologies.
Communication	What language will students need?	One advantage of a star topology is...
Cognition	What thinking will students do?	Compare, justify, solve, evaluate, or design.
Culture	What perspectives, contexts, or assumptions matter?	How design choices vary across workplaces and users.

Language of, for, and through Learning

The language triptych helps teachers notice three different language needs in one lesson.

Layer	Meaning	Example
Language of learning	Subject vocabulary and structures needed to understand the content.	database, primary key, relationship; A primary key identifies...
Language for learning	Language students need to participate, ask questions, compare, and collaborate.	Can you explain...? Our group chose... I agree because...
Language through learning	New language that emerges as students think, interact, and refine understanding.	A student realises that efficient is needed to justify a design choice.

Try this: before your next lesson, note three examples of language of learning and three examples of language for learning. Leave space to record useful language that emerges during the lesson.

What Good CLIL Looks Like

In a strong CLIL lesson, the subject challenge remains meaningful while the language demands are made visible and manageable.

- The content objective is clear and intellectually worthwhile.
- Essential vocabulary and communication functions are identified.
- Students use language to explain, compare, solve, justify, or create.
- Scaffolds support participation but can be reduced over time.
- First languages may be used strategically to support thinking and access.
- Assessment reflects the intended content and language learning.

Common Challenges

Common CLIL difficulties are usually practical rather than theoretical. The response is often a small change in input, interaction, or support.

Common problem	Practical response
Too much unfamiliar vocabulary	Select 6 to 10 essential terms and recycle them.
Long or dense source material	Chunk the text and adapt only what blocks access.
Students understand but cannot explain	Provide sentence frames and rehearsal time.
Mixed language levels	Use the same content with different levels of support.
The subject teacher lacks language-teaching confidence	Focus on the language students need for the task, not on teaching the whole language system.
Students remain passive	Use structured pair or group roles with a clear product.

Supporting Multilingual Learners

A student's current proficiency in the language of instruction is not a reliable measure of subject knowledge or thinking ability. CLIL should create access to the content without assuming that all multilingual learners have the same background or needs.

- Find out what students already know and allow strategic use of their first languages.
- Use diagrams, demonstrations, models, and worked examples alongside text.
- Pre-teach essential language rather than every unfamiliar word.
- Check cultural references as well as vocabulary and grammar.
- Allow planning and rehearsal before public speaking.
- Offer more than one way to demonstrate understanding.
- Avoid simplifying the intellectual content unnecessarily.

Part Three: AI and Teacher Judgement

What AI Can Do for Teachers

AI is most useful as a planning assistant. It can produce a quick first draft, but the teacher remains responsible for accuracy, curriculum alignment, timing, inclusion, and classroom fit.

What AI Can Help With

Four functions are particularly useful in CLIL planning.

Function	Examples
Adapt	Change text complexity, shorten sentences, create parallel versions, explain general academic vocabulary.
Generate	Draft lesson ideas, discussion questions, collaborative tasks, rubrics, and exit checks.
Scaffold	Create glossaries, sentence frames, writing structures, reading stages, and discussion support.
Differentiate	Vary support, output demands, follow-up tasks, and extension without changing the core topic.

Treat every output as a draft. AI-generated material is not verified teaching material until a teacher has checked it.

CLIL Challenges and Possible AI Support

The following map connects common classroom problems with possible AI support and the professional check that still belongs to the teacher.

CLIL challenge	Possible AI support	Teacher check
Dense technical text	Create a more accessible or chunked version.	Has the technical meaning survived?
Mixed language levels	Produce parallel versions or different scaffolds.	Are expectations still fair and appropriately challenging?
Students cannot discuss the content	Generate sentence frames and question stems.	Do the frames match the real task?
Limited preparation time	Draft an activity sequence.	Is the timing realistic for this class?
Difficult vocabulary	Suggest definitions, examples, and visuals.	Are the definitions technically accurate?
Low participation	Suggest structured pair or group roles.	Will every student have a meaningful role?
Language-heavy assessment	Draft dual-focus criteria.	Is content being weighted appropriately?

Where AI Falls Short

AI can produce technically inaccurate explanations, invented references, broken links, unsuitable CEFR estimates, over-simplified content, generic activities, and unrealistic timings. It can also reproduce cultural assumptions or bias. AI cannot see the students, notice confusion, or sense when an activity is not working. These are human judgements.

Responsible and Ethical Use

Responsible use begins before information is entered into a tool and continues until the material has been taught and reviewed.

Before Entering Material

- Remove student names and identifying information.
- Do not enter health, family, disciplinary, or other sensitive information.
- Do not upload identifiable student work without an appropriate basis and safeguards.
- Check whether source texts, images, and videos may legally be uploaded or processed.
- Avoid uploading complete copyrighted textbooks or restricted materials.

Before Using Generated Content

- Verify subject accuracy and open every external link.
- Review the suggested language level and restore any important meaning that was lost.
- Check cultural references, stereotypes, and assumptions.
- Adjust timing, grouping, instructions, and assessment to the real class.
- Tell students when substantial material has been generated or adapted using AI.
- Do not use an AI-detection score as proof of cheating.
- Keep final teaching, assessment, and disciplinary decisions with a person.

Teacher review: accuracy, level, bias, privacy, copyright, links, and classroom fit.

SCHOOL-LEVEL CHECK

Follow your organisation's data protection, safeguarding, procurement, copyright, and AI-use policies. The EU AI Act's AI-literacy duty has applied since 2 February 2025. This handbook supports practical literacy, but it is not a legal compliance guide.

[European Commission: AI literacy questions and answers](#)

Part Four: Using the AI-CLIL Platform

The platform helps teachers adapt source material, generate CLIL lesson components, organise resources, and customise classroom tasks. This section follows the workflow a teacher is most likely to use.

The platform is available through the AI-CLIL platform website. It is designed primarily for current desktop versions of Chrome, Edge, and Firefox. Some controls may display differently or function less reliably in Safari or on iPad. The interface is available in English and Italian.

The Platform in Five Steps

You can use individual features separately, but the full workflow is easiest to understand as five connected steps.

1. Add, paste, or save a source text, webpage, video, or document.
2. Adapt the language in Language Tools if the source is not accessible to the class.
3. Send the material to the Lesson Creator and generate CLIL lesson components.
4. Customise objectives, scaffolds, activities, resources, and assessment.
5. Review accuracy, save the lesson, and adjust it after classroom use.

Quick Reference: What Can I Do Where?

I want to...	Use...
See all saved lessons	Lessons
Adapt a text to another CEFR level	Language Tools
Compare versions of the same text	Language Tools
Create a complete CLIL lesson	Lesson Creator
Turn a saved resource into a lesson	Resources, then Lesson Creator
Change one generated section	Customise
Choose a particular activity format	Activity Types
Save source material	Resources
Store recurring class information	Class Profiles
Hear a text read aloud	Read Aloud
Save a webpage quickly	Chrome extension, where installation is permitted

Use this table as a starting point. Each feature is explained in detail in the sections that follow.

Learn the platform one task at a time

You do not need to complete a long tutorial before starting. Choose one immediate task: adapt a text, create a lesson, add a resource, or review generated material. The sections that follow provide short, task-focused guidance for each feature.

Return to the feature you need when planning. Each section includes a practical teacher check or a classroom workaround.

A SIMPLE FIRST ROUTE

Open the Lessons Dashboard, adapt one familiar text in Language Tools, review it, then send it to the Lesson Creator. Save only after checking the subject content and language level.

The Lessons Dashboard

When you open the platform, you land on the Lessons dashboard. This is your home screen: it shows all the lessons you have created, organised by date. Each lesson appears as a card with a short description and its title.

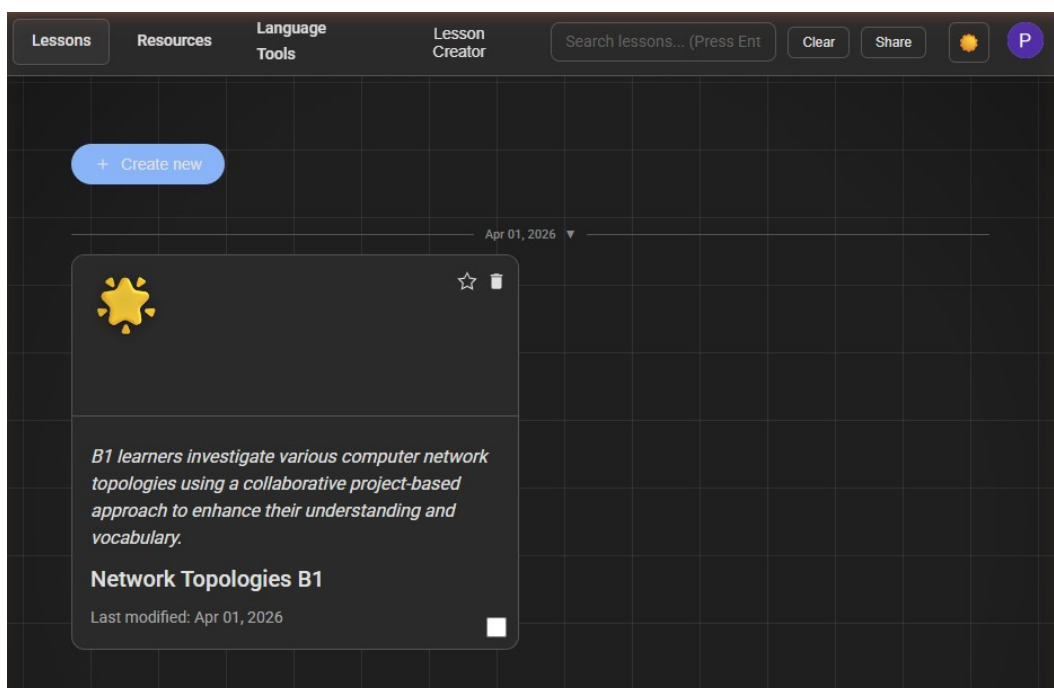


Fig. 1: The Lessons dashboard. The blue 'Create new' button starts a fresh lesson; saved lessons appear as cards below.

The navigation bar gives access to the main platform areas. Use search to find saved lessons and open a lesson card to review, edit, duplicate, share, or continue working, depending on the options available in the current platform version. Name lessons clearly so they remain easy to find later.

In practice

Bookmark the platform URL in your browser. If you teach across multiple devices, the platform works on tablets and laptops alike. A larger screen gives you more room to work with generated content.

Language Tools: The Text Converter

Language Tools is the platform's text adaptation area. Paste a passage from a textbook, teacher-created document, or other permitted source. The tool provides an approximate AI-generated CEFR assessment and produces adapted versions at the levels you select. This is a planning aid, not a formal language assessment.

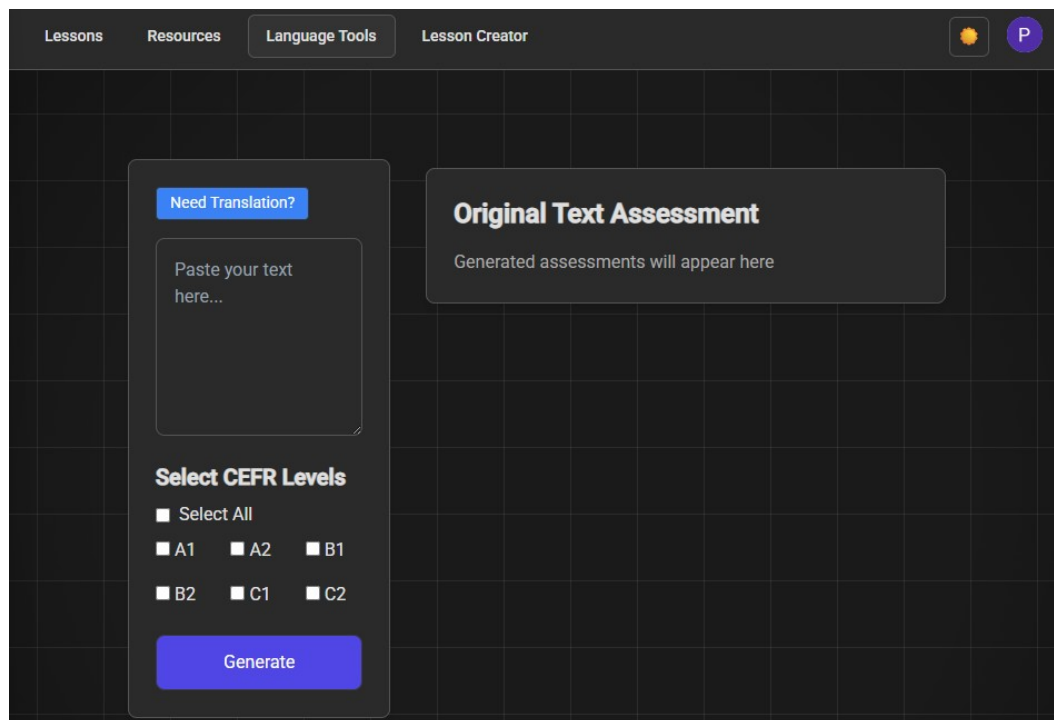


Fig. 2: Language Tools, empty state. The 'Need Translation?' button at the top left handles translation between English and Italian.

To use Language Tools, paste your text into the input area on the left. Then select the CEFR levels you want. You can choose any combination of A1, A2, B1, B2, C1, and C2. Click Generate, and the platform will analyse your text and produce adapted versions at each selected level.

What the output looks like

After generation, the platform shows two things side by side. On the right, it displays an assessment of your original text, identifying its current CEFR level and explaining why. Below that, it shows the adapted versions with detailed analysis of what changed.

The screenshot shows the AI-CLIL-ET interface. On the left, there is a text input area with a 'Need Translation?' button. Below it, a 'Select CEFR Levels' section shows checkboxes for A1, A2, B1, B2, C1, and C2. B1 is selected. A 'Generate' button is at the bottom. On the right, the 'Original Text Assessment: B2' is displayed. Below this, the 'Level B1' section shows the adapted text and a list of changes: Vocabulary Simplification, Grammar Structures, Sentence Complexity, Text Organization, Topic Relevance, Functional Language, and Cultural Neutrality.

Fig. 3: A B2-level source assessed and adapted down to B1.

The platform explains the main changes it has made to vocabulary, grammar, sentence complexity, organisation, and functional language. Use this analysis to review the adaptation rather than assuming that the CEFR label is correct. Essential technical meaning and qualifications may need to be restored manually.

The screenshot shows the AI-CLIL-ET interface with the 'Level C1' section selected. The 'Adapted Text' is displayed, showing a more complex version of the original text. Below it, a list of changes is shown: Vocabulary Simplification, Grammar Structures, Sentence Complexity, Text Organization, Topic Relevance, Functional Language, and Cultural Neutrality.

Fig. 4: The same source adapted up to C1. The tool works in both directions: it can simplify for learners who need more language support or elevate language for advanced groups preparing for examinations.

In practice

Use Language Tools to create comparison exercises. Generate B1 and B2 versions of the same text, then ask students to read both and discuss what changed. During the project, this comparison activity consistently produced some of the richest classroom discussion. Students noticed vocabulary differences, sentence structures, and even shifts in tone.

Try it

Take a text you are already using in class this week. Paste it into Language Tools and generate versions at two different levels. Compare them yourself first: Has the main meaning survived? Are the key technical terms still there? Then try using the lower-level version as a warm-up before giving students the original.

The Lesson Creator

Language Tools adapts existing text. The Lesson Creator builds complete lesson plans from prompts you write, including content objectives, language objectives, learning tasks, and assessment criteria.

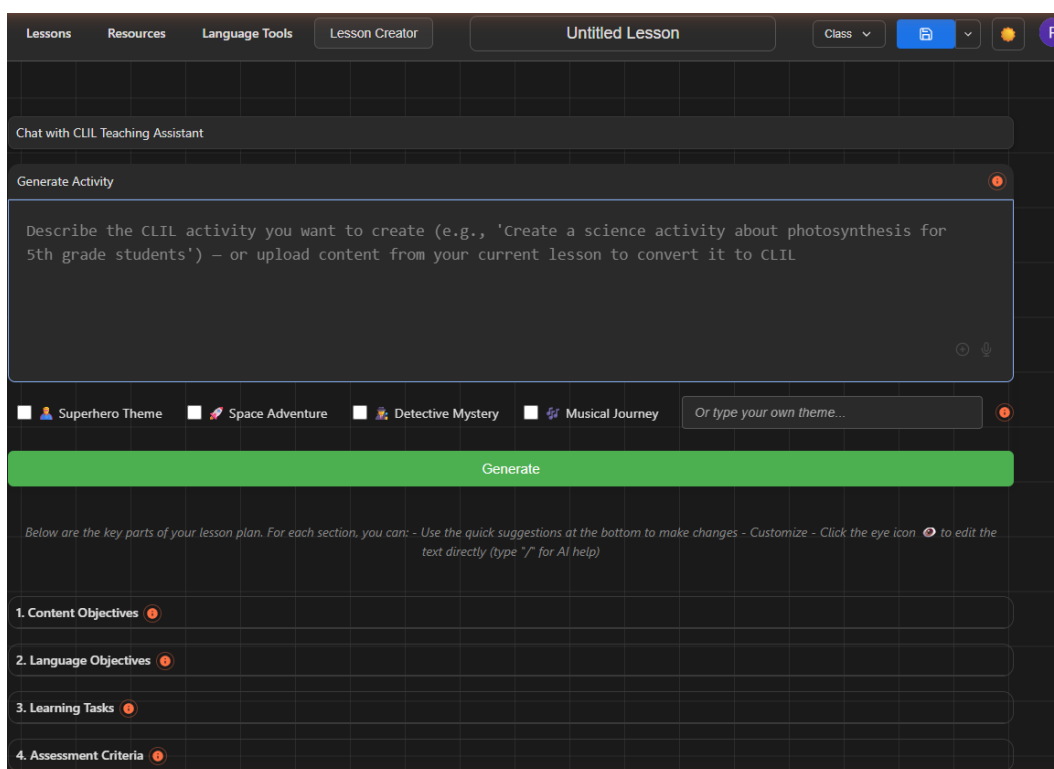


Fig. 5: The Lesson Creator before a prompt has been entered. The Chat with CLIL Teaching Assistant bar sits at the top; below the prompt area, four optional creative themes (Superhero, Space Adventure, Detective Mystery, Musical Journey) can be applied.

To create a lesson, include the topic, lesson length, student profile, approximate CEFR level, content objective, communication function, preferred activity type, scaffolds, assessment, and any constraints.

Prompt formula: Create a [length] CLIL lesson on [topic] for [age/course] students at approximately [CEFR level]. The content objective is [objective]. Students should practise [communication function]. Include [activity type], [scaffolds], [assessment], and [constraints].

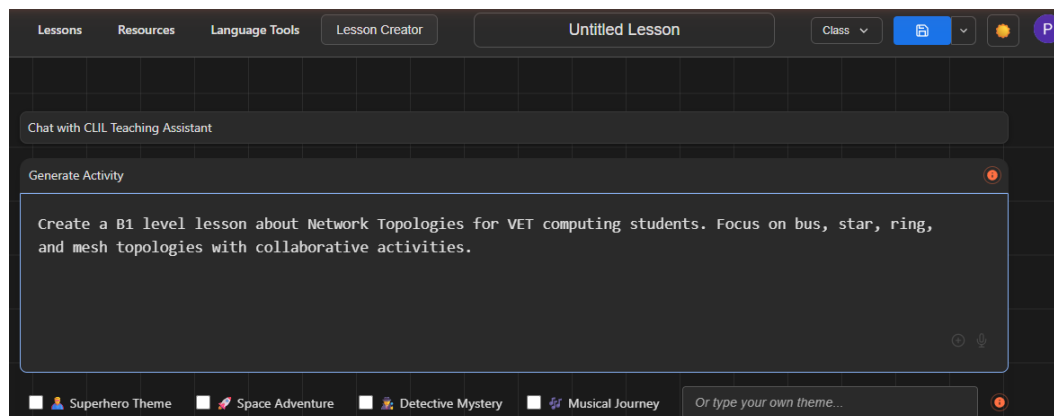
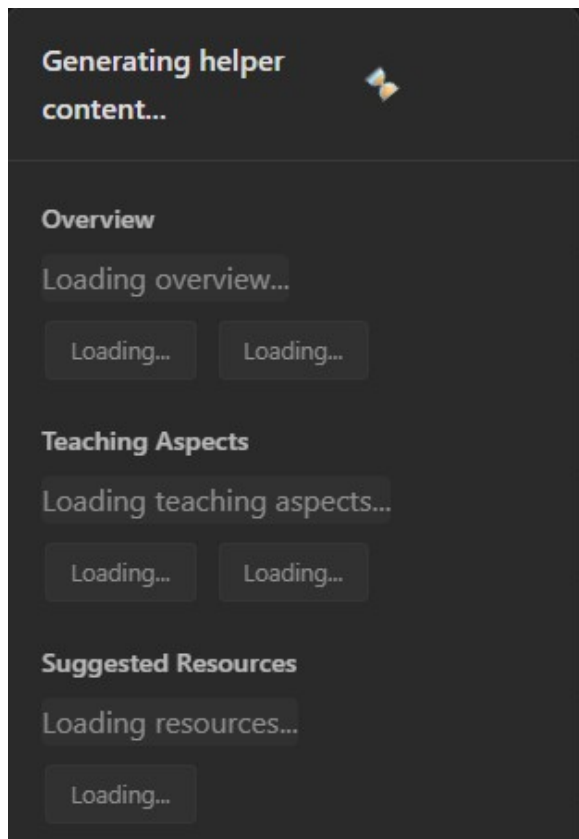


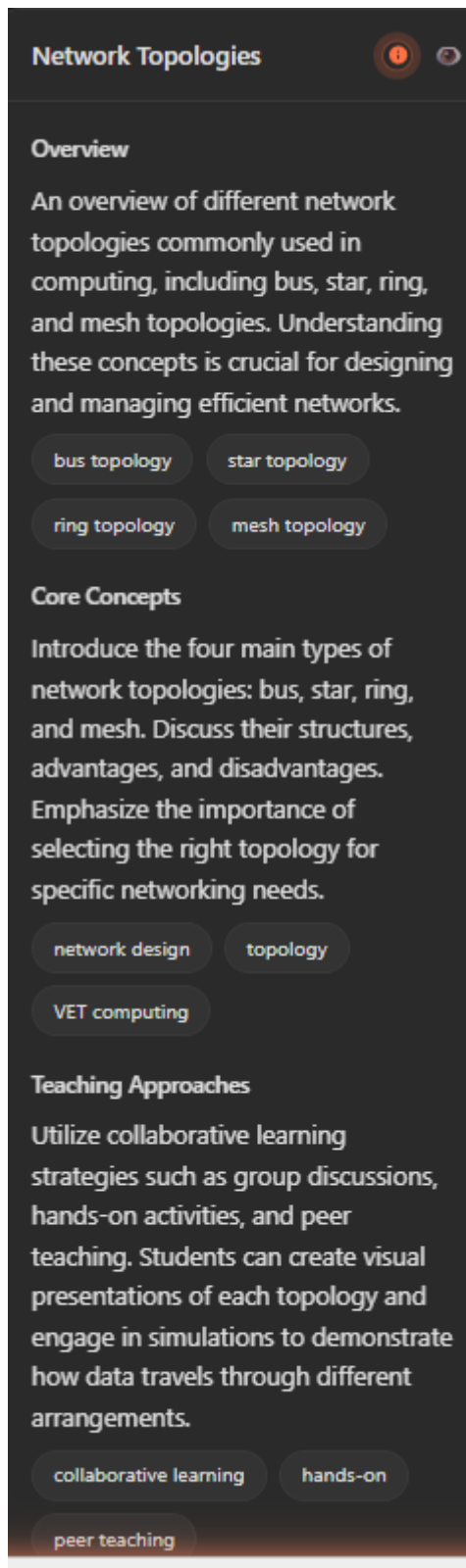
Fig. 6: A B1 prompt for a Network Topologies lesson, with optional theme buttons below.

The generation process

After you submit your prompt, you will see a loading screen as the platform builds your lesson, generating an overview, teaching aspects, and suggested resources.



The generation loading screen. The platform is building three components: Overview (a topic summary), Teaching Aspects (pedagogical approaches), and Suggested Resources. Each loads independently.



The generated helper content that appears alongside your lesson. This panel shows an Overview of the topic (network topologies), Core Concepts to cover (with keyword tags like 'bus topology,' 'star topology,' 'network design'), and Teaching Approaches suggesting collaborative learning strategies, hands-on activities, and peer teaching. These keyword tags help you quickly see what the platform has identified as the key elements of your lesson.

Understanding Generated Lesson Content

A generated lesson is divided into numbered sections. Here is what each one does and how to use it.

1. Content Objectives

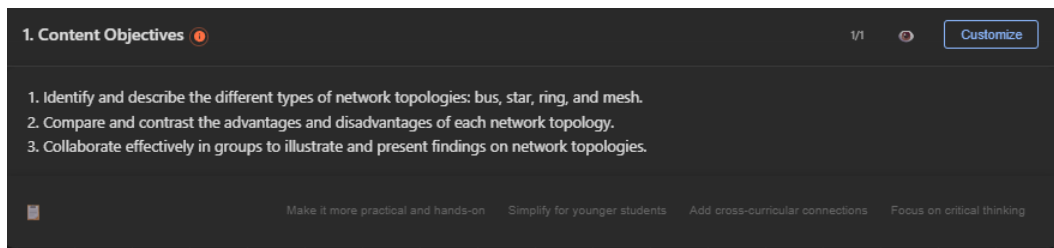


Fig. 7: Generated Content Objectives, with one-click suggestions at the bottom and a Customize button at the top right.

Content objectives define what students should know or do by the end of the lesson. Check them against your actual curriculum. You may want to narrow the focus or add a specific technical skill that matters for your students' assessment.

2. Language Objectives

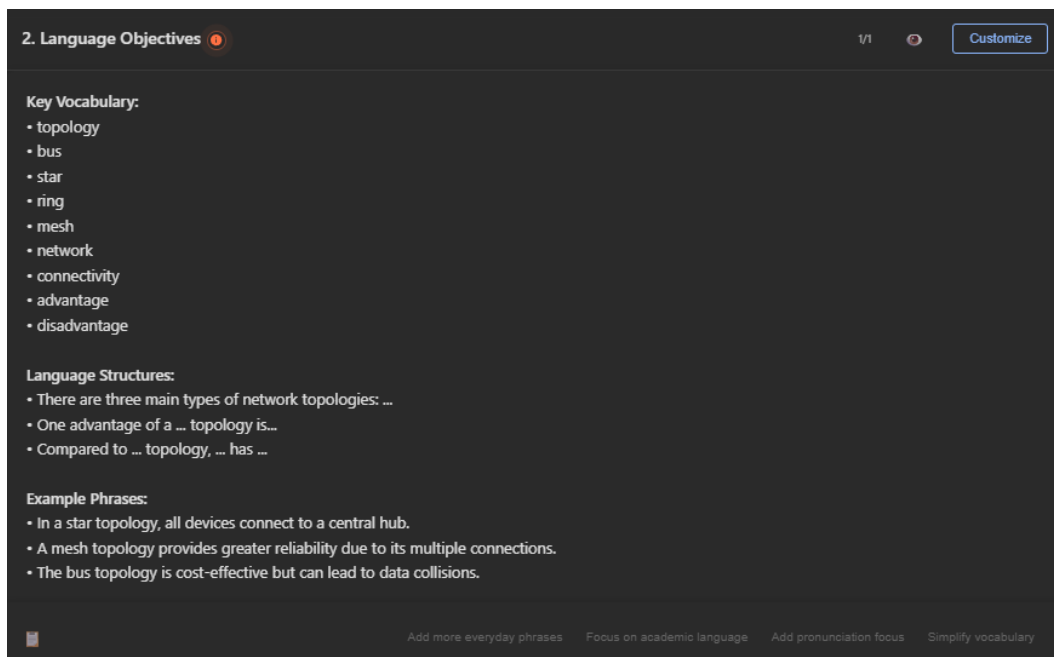


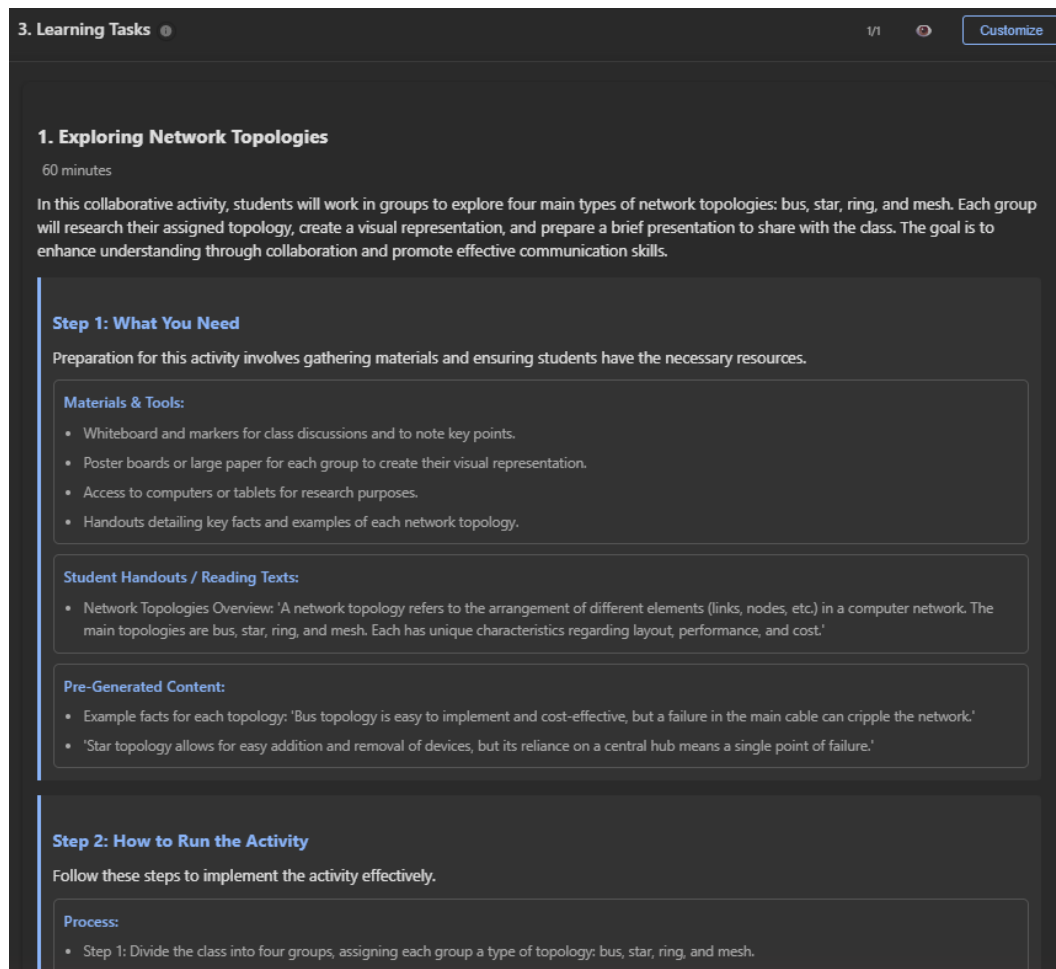
Fig. 8: Language Objectives: key vocabulary, sentence frames, and example phrases.

This is where the CLIL dimension becomes explicit. The suggested vocabulary list can help you decide which terms may need pre-teaching. The language structures give your students ready-made sentence frames for speaking and writing about the topic. The example phrases model how those structures sound in practice. Together, these three elements form the language scaffolding for your lesson.

In practice

Print or project the Language Structures section during class. When students need to discuss or write about the topic, they can refer to these frames. Sentence starters like 'One advantage of a ... topology is...' reduce the cognitive load of expressing ideas in a second language, so students can focus on the content rather than struggling with how to say it.

3. Learning Tasks



3. Learning Tasks 1/1 Customize

1. Exploring Network Topologies
60 minutes

In this collaborative activity, students will work in groups to explore four main types of network topologies: bus, star, ring, and mesh. Each group will research their assigned topology, create a visual representation, and prepare a brief presentation to share with the class. The goal is to enhance understanding through collaboration and promote effective communication skills.

Step 1: What You Need

Preparation for this activity involves gathering materials and ensuring students have the necessary resources.

Materials & Tools:

- Whiteboard and markers for class discussions and to note key points.
- Poster boards or large paper for each group to create their visual representation.
- Access to computers or tablets for research purposes.
- Handouts detailing key facts and examples of each network topology.

Student Handouts / Reading Texts:

- Network Topologies Overview: 'A network topology refers to the arrangement of different elements (links, nodes, etc.) in a computer network. The main topologies are bus, star, ring, and mesh. Each has unique characteristics regarding layout, performance, and cost.'

Pre-Generated Content:

- Example facts for each topology: 'Bus topology is easy to implement and cost-effective, but a failure in the main cable can cripple the network.'
- 'Star topology allows for easy addition and removal of devices, but its reliance on a central hub means a single point of failure.'

Step 2: How to Run the Activity

Follow these steps to implement the activity effectively.

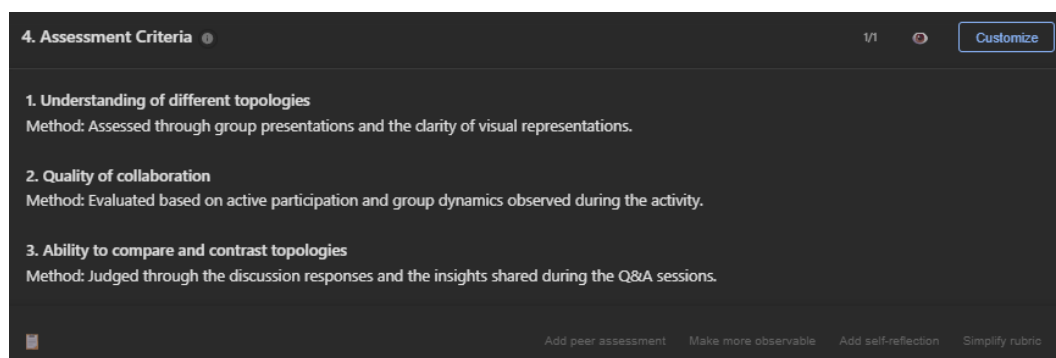
Process:

- Step 1: Divide the class into four groups, assigning each group a type of topology: bus, star, ring, and mesh.

Fig. 9: Learning Tasks: a full collaborative activity, with timing, materials, and discussion prompts.

The Learning Tasks section provides the main classroom activity. It is usually the longest and most detailed section. The platform generates structured, step-by-step tasks with materials lists, discussion prompts, and suggested timing. You will almost certainly want to adapt these to your specific classroom by adjusting timing, simplifying instructions, or adding resources you already have.

4. Assessment Criteria



4. Assessment Criteria 1/1 Customize

1. Understanding of different topologies
Method: Assessed through group presentations and the clarity of visual representations.

2. Quality of collaboration
Method: Evaluated based on active participation and group dynamics observed during the activity.

3. Ability to compare and contrast topologies
Method: Judged through the discussion responses and the insights shared during the Q&A sessions.

Add peer assessment Make more observable Add self-reflection Simplify rubric

Fig. 10: Assessment Criteria, with quick edit suggestions.

The assessment criteria give you a starting framework for evaluating student work. During the project, teachers found these useful as first drafts but often modified them. For example, one teacher increased the weighting for collaboration and participation. Use the customisation buttons to adjust the criteria to match how you actually plan to assess the lesson.

5. Key Information and Extended Tasks

Beyond the four core sections, the platform also generates supplementary content that you can use or set aside depending on your needs.

5. Text Deep Learning 1/1 Customize

Key Information About the Subject (Pareto Principle 80/20)

- 1. **Bus Topology** A bus topology connects all devices to a single communication line, reducing overall cabling costs but vulnerable to cable failures.
- 2. **Star Topology** In a star topology, all devices connect to a central hub, making it easy to add devices but susceptible to a single point of failure at the hub.
- 3. **Ring Topology** A ring topology connects devices in a circular fashion, where each device has exactly two neighbors, allowing for orderly data transmission but issues if a single device fails.
- 4. **Mesh Topology** In mesh topology, all nodes are interconnected, providing redundancy and reliability, but at a higher cost due to extensive cabling.
- 5. **Connectivity** Connectivity refers to how well the topology connects different devices, affecting data transfer speeds and reliability.
- 6. **Scalability** The scalability of a topology addresses how easily new devices can be integrated without disrupting existing network performance.
- 7. **Performance** Performance varies across topologies; for example, bus may slow down with traffic, whereas star may maintain speed as devices are added.
- 8. **Cost-Effectiveness** Cost-effectiveness is crucial in choosing a topology; bus is often the cheapest, while mesh is typically the most expensive due to wiring.
- 9. **Network Management** Different topologies require varying degrees of management and maintenance, affecting operational overhead.
- 10. **Flexibility** Some topologies, like star, offer flexibility in designing and expanding networks, which is critical in dynamic environments.

Fig. 11: Key information about the topic. Treat this as a concise AI-generated summary that requires teacher review, not as a complete account of what students need to know.

Socratic Questions

Question Types: Analytical, Comparative, Reflective, Cause & Effect, Hypothetical, Ethical

- What are the key features that define each network topology?
- How does the performance of a star topology compare to a bus topology under heavy traffic?
- Reflecting on today's activity, what was the most challenging aspect of presenting your group's findings?
- What would happen if a device in a ring topology stopped functioning?
- If you were designing a network for a new school, which topology would you choose and why?
- What ethical issues arise with the choice of a network topology in terms of data security?

Extended Writing Exercises

Writing Types: Analytical Essay, Creative Application, Comparative Essay, Reflective Writing, Persuasive Writing

Comparative Essay

Write an essay comparing and contrasting at least two network topologies, discussing their advantages and disadvantages regarding performance and reliability.

Reflective Writing

Reflect on the group activity, describing your individual contributions and what you learned about the collaboration process.

Analytical Essay

Analyze how different network topologies can impact the overall success of computer networking in various organizational contexts.

Simplify Language Add Real-World Examples Enhance Critical Thinking Cultural Perspectives Visual Learning

Fig. 12: Supplementary content: Socratic Questions (analytical, comparative, reflective, hypothetical, ethical) and Extended Writing Exercises (analytical, comparative, group, reflective, persuasive). Ready-made extension activities for deeper engagement.

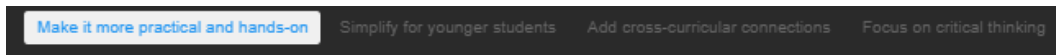
From the pilot

Teachers in the project found that the Socratic Questions section was particularly useful for sparking classroom discussion. Rather than creating discussion prompts from scratch, they used these as starting points and adapted them to their students' interests and level. The questions work well as warm-ups, exit tickets, or homework prompts.

These follow-up materials sit below the four core sections of any generated lesson. Use them selectively: a single Socratic question can become a strong plenary prompt, or one extended writing exercise can serve as a take-home task. Most teachers in the project used these sparingly rather than wholesale.

Customising Generated Content

You can customise any section without regenerating the whole lesson. There are two ways to do it.



Quick customisation buttons appear at the bottom of each section. These are one-click suggestions: 'Make it more practical and hands-on,' 'Simplify for younger students,' 'Add cross-curricular connections,' and 'Focus on critical thinking.' Clicking any of these immediately adjusts that section's content.

For more specific changes, click the Customize button at the top right of any section. This opens a text input panel where you can type detailed instructions. For example, you might write 'Add a specific coding exercise using Python' or 'Reduce the number of objectives to two' or 'Include vocabulary definitions in Italian.'

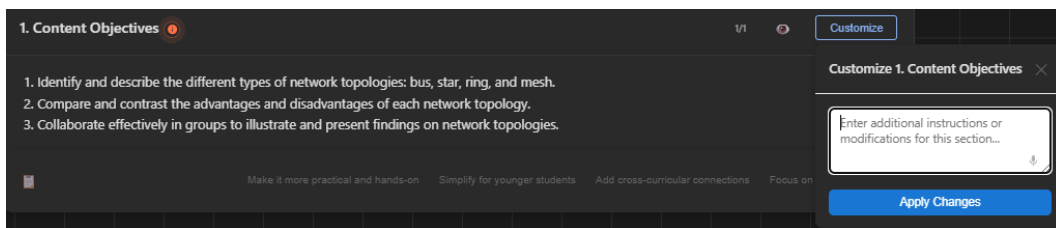


Fig. 13: The Customize panel for adjusting a single section.

Try it

Generate a lesson, then use the 'Simplify for younger students' button on the Language Objectives section. Compare the before and after. Notice how the vocabulary list changes, the sentence structures become shorter, and the example phrases use more familiar language. This is a quick way to differentiate a lesson for a weaker group without starting over.

The Resources Tab

The Resources tab is your personal source library. Add URLs, articles, YouTube videos, and notes. Any content you want the platform to use when generating lessons will make your lessons more focused and relevant than those generated from a topic name alone.



Fig. 14: A YouTube video added to the Resources library, with an auto-generated summary.

When a supported video has accessible captions or a transcript, the platform can extract the text, generate a summary, and make that content available as source material. Teachers should verify the transcript, the source, and the relevant usage rights before using it in a lesson.

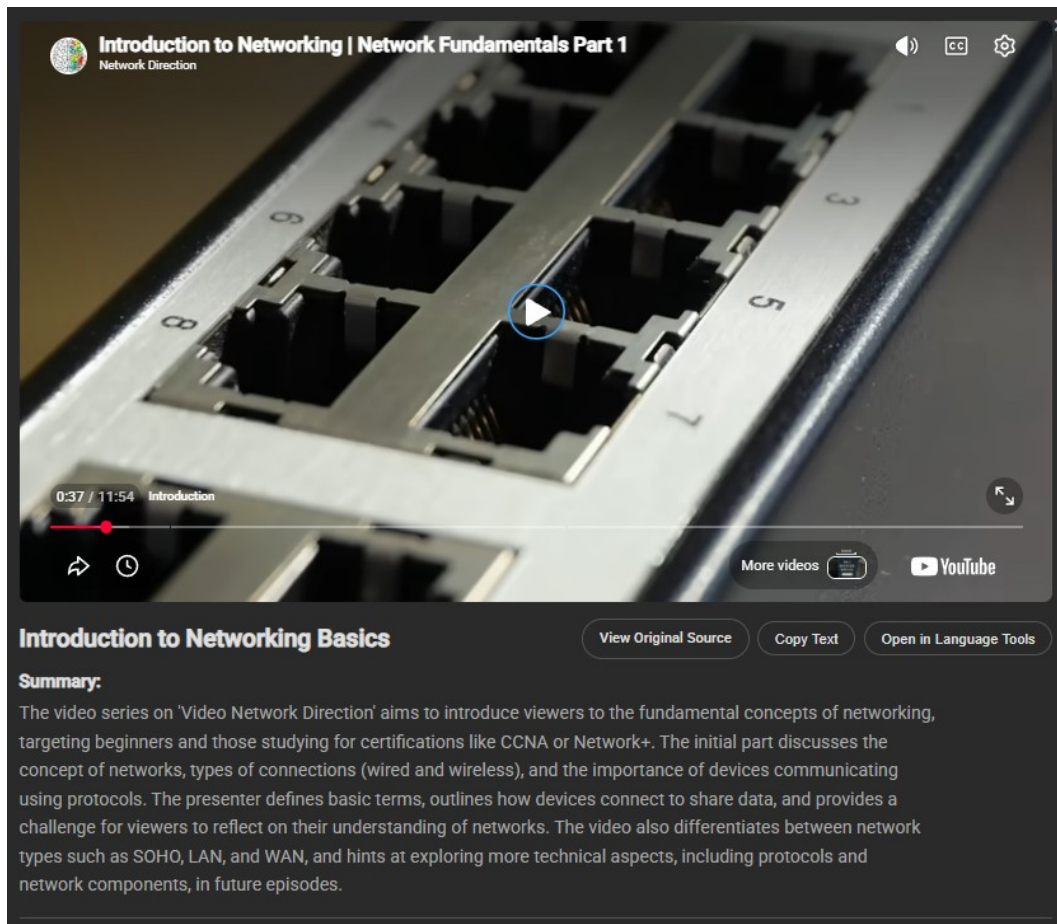


Fig. 15: An expanded resource: video player embedded, with options to view source, copy text, or send into Language Tools.

In practice

The 'Open in Language Tools' button on each resource is a shortcut worth knowing. If you find a good YouTube video or article but the language is too advanced for your class, you can send its extracted text straight to Language Tools and generate an adapted version at the right CEFR level without leaving the platform.

Selecting resources for lesson generation

Adding a resource to your library is only the first step. To actually use a resource when creating a lesson, you need to select it. Click the checkbox on the resource card. When it turns green, that resource is active and will be used as source material the next time you create a lesson.

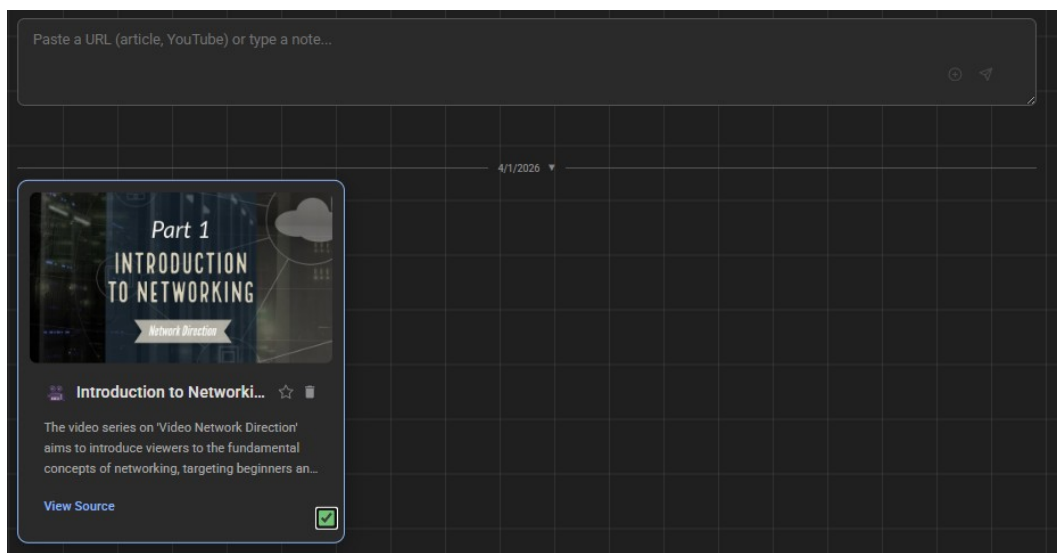
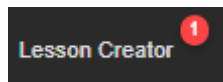
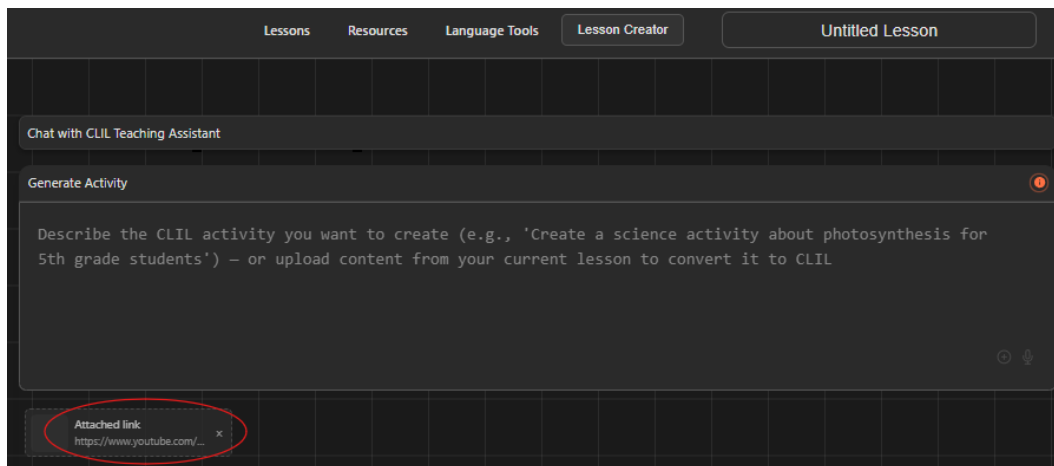


Fig. 16: Selecting a resource card to make it active for lesson generation.



After selecting a resource, a notification badge appears on the Lesson Creator tab in the navigation bar. This red badge with a number tells you that a resource has been selected and is ready to be used in your next lesson.



Back in the Lesson Creator after selecting a resource, the attached source appears at the bottom left of the prompt area as a link tag. This confirms that when you generate, the platform will draw from that specific source rather than starting from scratch.

This resource-based workflow is the recommended way to use the platform for best results. Rather than typing only a topic name, attach specific sources such as textbook chapters, technical documentation, curated articles, or educational videos, and the platform will ground its output in that material.

From the pilot

Teachers in the project found that lessons generated from their own source materials were more focused and relevant than lessons generated from a topic alone. Build your resource library gradually. Each time you find a useful article, video, or reference page, add it to the Resources tab. Over time you will have a curated collection of sources ready to use whenever you plan a new lesson.

Settings and Class Profiles

Settings lets you customise the platform for your classes and teaching style. Access it by clicking your profile icon in the top right corner.

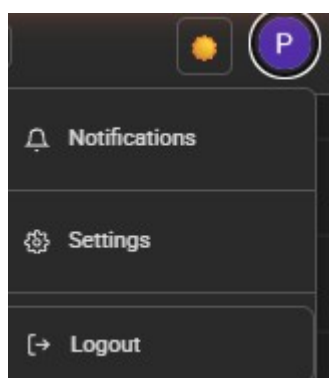


Fig. 17: The Settings option in the profile menu.

Fig. 18: The Settings page. Class profiles on the left, TTS settings below, and three sliders on the right control technical vocabulary, grammar complexity, and the content/language balance.

The three sliders on the right side of the Settings page are particularly useful. They let you control the balance of your generated content without having to explain it in every prompt. 'Level of Technical Vocabulary' adjusts how many specialist terms appear. 'Grammar Complexity' controls sentence structure difficulty. 'Content vs Language Focus' shifts the balance between subject matter depth and language support.

Here is what each slider does in practice. Level of Technical Vocabulary: slide left for more everyday language, or right for a higher density of specialist terms. Grammar Complexity: adjust this according to the task and the learners. Students working at B1 may still need to encounter complex structures when these are central to the subject, so review the generated text rather than relying on the slider position alone. Content vs Language Focus: slide left to emphasise language support, or right to emphasise subject depth. A middle setting is often a useful starting point, followed by teacher review and adjustment.

Saving class profiles

The Your Classes section lets you save different profiles for different student groups. If you teach a B1 class of fourteen-year-olds in the morning and a B2 class of eighteen-year-olds in the afternoon, you can save both profiles and switch between them without reconfiguring settings each time.

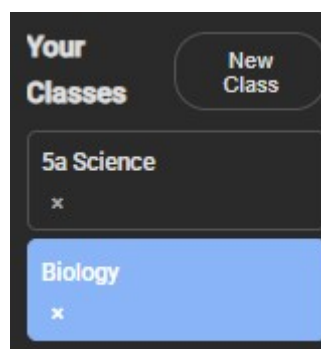


Fig. 19: Saved class profiles in Settings.

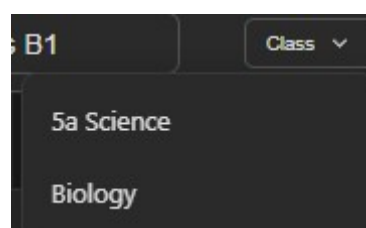


Fig. 20: Switching between class profiles from the Lesson Creator.

Try it

Set up two class profiles: one for your strongest class and one for a class that needs more support. Then create the same lesson for both profiles and compare the output. Notice how the platform adjusts language level, vocabulary support, and task complexity based on the profile you select.

Read Aloud: Synthetic Text-to-Speech Support

Read Aloud can support listening, independent review, and pronunciation practice. Synthetic speech may mispronounce names and specialist terminology, so test important terms before class and model them yourself when necessary.

During playback, a floating stop button appears so you can pause at any time. This feature is useful in several ways: students can hear synthetic read-aloud support of technical vocabulary, teachers can play adapted texts aloud as a listening comprehension exercise, and the audio provides a second channel of access for students who find reading alone difficult.

From the pilot

In the computer networks lesson with class 1 EQ, the teacher used the Read Aloud feature so students could hear a synthetic read-aloud model of terms like 'protocol,' 'browsing,' and 'cloud storage.' The teacher noted it was especially helpful for fourteen-year-old B1 learners encountering these English terms for the first time.

TRY IT WITH ONE PARAGRAPH

Play an adapted paragraph once for overall meaning. Replay key sentences, then ask students to identify any name or technical term the synthetic voice handles poorly. Model those words yourself.

Activity Types Library

In Activity Types, you choose which classroom formats the platform should use when generating lessons. They are organised into six categories, each with specific formats you can turn on or off.

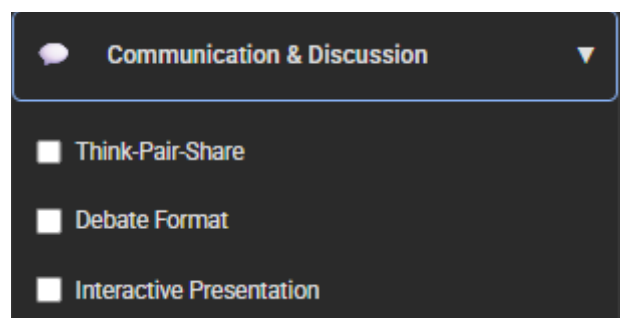


Fig. 21: The Communication and Discussion activity types.

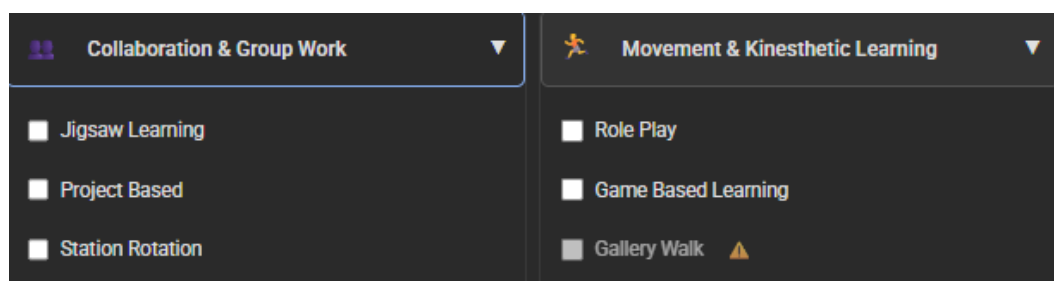


Fig. 22: Collaboration and Movement activity categories.

When you select activity types before generating a lesson, the platform will incorporate those formats into the output. For example, if you enable 'Jigsaw Learning' and 'Think-Pair-Share,' your generated lesson tasks will be structured around those specific collaborative formats rather than generic instructions.

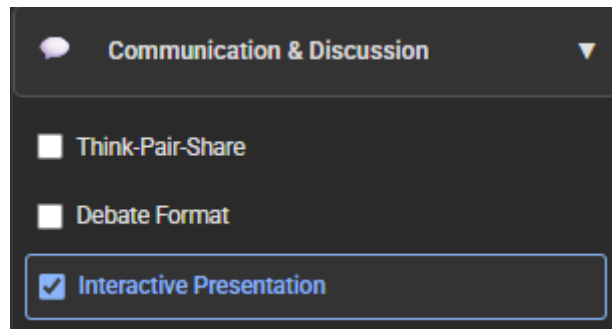


Fig. 23: Selecting an activity type to include in generated lessons.

Creating custom activity types

Beyond the built-in options, you can also create your own custom activity types. If you have a favourite classroom format that works well with your students (a particular discussion structure, a game you use regularly, or a project format that suits your subject), you can save it as a custom activity type.

Fig. 24: Creating a custom activity type. Give it a name, pick a category, and describe how it should be structured; it then appears in 'My Custom Activities' on the Settings page.

In practice

You do not need to enable all activity types. Choose one or two that suit your topic and your class. A single well-chosen activity, like a jigsaw reading or a structured debate, can transform a lesson more effectively than a long list of tasks.

The Chat Teaching Assistant

The Lesson Creator includes a chat interface called the CLIL Teaching Assistant. Think of it as a planning conversation: you can ask questions, get suggestions, and refine your approach before generating the full lesson.

Useful Opening Requests

- Ask me five questions before creating this lesson.
- Help me identify the language demands of this topic.
- Suggest three possible activities, but do not generate the full lesson yet.

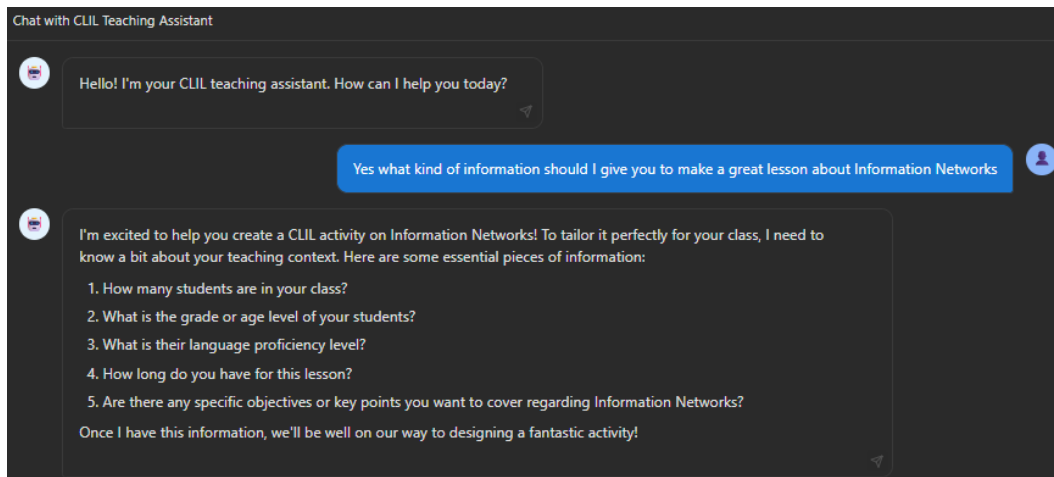


Fig. 25: A planning conversation with the CLIL Teaching Assistant.

Use it when you are unsure how to frame a prompt, or when you want to explore different teaching angles before generating.

In practice

If you are new to the platform, start with the Chat Teaching Assistant rather than jumping straight into Generate Activity. Tell it what you are teaching, who your students are, and what you are hoping to achieve. The assistant will help you think through the right settings and prompt before you generate.

The Chrome Extension: Optional Experimental Feature

The platform includes an optional Chrome browser extension that you can download directly from the dashboard. Look for the "Download Extension" link in the top navigation bar. The extension is provided as a ZIP file. To install it, unzip the file, open Chrome, go to `chrome://extensions`, enable Developer Mode, and click "Load unpacked" to select the unzipped folder.

The extension may require Developer Mode and permission to install an unpacked extension. School-managed devices may block it. The platform remains fully usable by adding resources manually.

Once installed, the extension allows you to save web resources directly to your platform account while browsing. If you find an article, a video, or a webpage that you want to use as source material for a CLIL lesson, you can add it to your Resources library without leaving the page. These saved resources then appear in your Resources tab and can be selected as source material when generating lessons through the Lesson Creator.

If the extension is unavailable, open Resources and paste the page URL or upload the file manually. You can select the resource in the Lesson Creator in the same way. Teachers who regularly collect materials from the web may still find that the extension saves a few steps.

Interface Themes and Language

The platform supports both light and dark interface themes, and can switch between English and Italian. These options let you work in whatever visual and language setting is most comfortable.

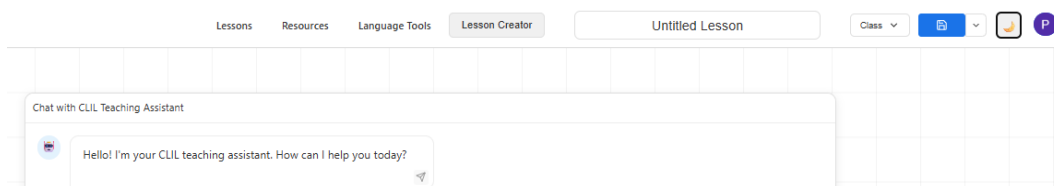


Fig. 26: Light interface theme.

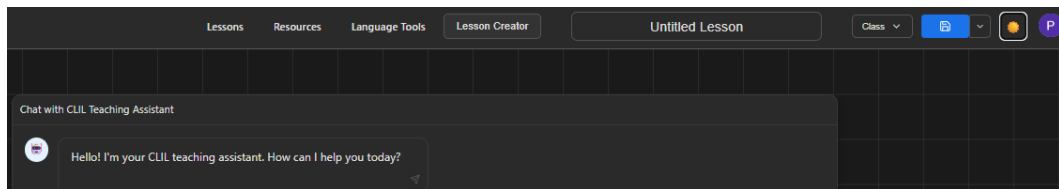


Fig. 27: Dark interface theme.

Language switching is available in the Settings area. Italian-speaking teachers may prefer to navigate the platform in their first language while generating English-language CLIL materials. All generated lesson content remains in English regardless of the interface language, unless you specifically request output in Italian.

Tips for Getting the Most from the Platform

Teachers who used the platform throughout the project offered these tips:

Start simple. Create one lesson on a topic you know well before experimenting with advanced settings. Your first lesson will teach you how the platform works better than any guide.

Use your own sources. Lessons generated from your curated resources in the Resources tab are more focused and relevant than those generated from a topic name alone.

Iterate. Generate, review, adjust, and regenerate when useful. A focused second version is often more useful than the first. Use the Customize panel to refine individual sections without losing the rest.

Save your class profiles. Setting up profiles in Settings saves time and ensures the platform produces materials matched to each group without reconfiguring every time.

Explore the Activity Types. Browsing the library may spark new ideas, and creating custom activities keeps your favourite classroom formats always available.

In practice

Allow time to generate, check, and revise the first few lessons. Speed varies with the task, the source material, and server demand. A small library of verified sources, class profiles, and proven prompts usually saves more time than repeated regeneration.

Known Issues and Workarounds

Issue	Likely cause	Workaround
A link does not open	The suggested link is outdated or AI-generated.	Search for the resource manually and replace the link.
A lesson takes a long time to generate	Server demand or a very long prompt.	Wait, then retry with a shorter and more focused prompt.
The interface looks different on iPad	Browser compatibility.	Use a current desktop browser where possible.
A technical term is pronounced incorrectly	Synthetic speech limitation.	Model it yourself or use a reliable specialist dictionary.
The output is too generic	The prompt lacks context.	Add the subject, level, objectives, class profile, and constraints.
The adaptation changes the meaning	Over-simplification.	Restore technical detail and regenerate only the affected section.
The extension cannot be installed	School device restrictions.	Add resources manually in the Resources tab.

Like any developing tool, the platform has some rough edges. Teachers in the project encountered a few issues worth noting.

Safari and iPad display. Some interface elements may not render correctly in Safari or on iPad. If you experience layout problems, try using Chrome or Firefox instead. On iPad, the platform works but some buttons or panels may be harder to reach. A desktop or laptop generally provides the best experience.

Broken multimedia links. The platform sometimes generates links to external resources (videos, articles) that are no longer active. Always check generated links before sharing them with students. If a link is broken, replace it with one you have verified, or remove it and use the content description as a prompt to find your own source.

Tutorial length. The introductory tutorial covers many features at once, which some teachers found overwhelming. This handbook is designed to serve as a more structured alternative. Work through the features one at a time rather than trying to learn everything in a single session.

Part Five: Practical CLIL Strategies

Adapting Texts

Often, students do not struggle with the concept. They struggle with how it is expressed. A source text may be accurate and well written for advanced readers, but too dense, abstract, or linguistically demanding for the class in front of the teacher.

Keep, Change, and Check

Keep	Change when needed	Check
Essential technical terms and core meaning	Sentence length, density, uncommon general vocabulary	Has any important qualification disappeared?
Important cause-and-effect relationships	Unnecessary cultural references and obstructive passive structures	Is the intellectual challenge still meaningful?
Useful diagrams and examples	Organisation and chunking	Is the adapted text actually easier for this class?

Shorter does not always mean easier, and simpler language should not mean simpler thinking.

Good adaptation does several things at once: shorter sentences, simpler vocabulary, clearer paragraph structure, more direct explanations. At the same time, key subject concepts remain visible. A good adapted text should not feel empty; it should still teach something real.

From the pilot

In class 3 AINF, a teacher used adapted texts about bias in artificial intelligence. The B1 version reduced the word count from 603 to 416 while retaining the main ideas. Students read both versions and discussed which was clearer, which words were difficult, and what changed. Several students were unfamiliar with the reference to *The Great Gatsby*. In the available responses, nine of fourteen students made a broadly appropriate connection between the cultural reference and bias in AI training data, while five could not explain it. This showed that cultural references can create barriers even when vocabulary and sentence structure are accessible.

AI is useful here because it can generate multiple versions quickly. A teacher can create a B1 version for first access, a B2 version for consolidation, and a C1 version for comparison or extension. This makes differentiated use of the same content much more manageable.

In practice

Adapt the language, not the intellectual value. Students should feel supported, not patronised. A simpler text does not mean simpler thinking. It means better access.

Supporting Vocabulary

Vocabulary support is central to CLIL. Students cannot engage with a subject if they do not know the key words. In technical and vocational subjects, this challenge intensifies: specialised terminology, abstract nouns, compressed explanations, and words that carry different meanings in everyday and subject English.

A Six-Step Vocabulary Routine

1. Select 6 to 10 essential words.
2. Separate technical terms from general academic words.
3. Write student-friendly definitions.
4. Add one visual, example, or non-example.
5. Provide a sentence frame that uses the word.
6. Recycle the words during discussion, writing, and review.

The project reports show that even when a text was successfully adapted, some terms still caused difficulty. Students in the jQuery lesson highlighted words like 'querying,' 'DOM,' 'lightweight,' and 'straightforward.' In the relational databases lesson, advanced learners noted difficulty with dense academic vocabulary like 'feasible,' 'encompassing,' and 'usability.' Adaptation does not remove the need for focused vocabulary work.

AI can help teachers identify key terms, create short definitions, generate matching tasks, produce sentence stems, or organise vocabulary into categories such as concept words, process words, and discussion language. A practical classroom routine is to introduce a small set of key words before the task, revisit them during the task, and ask students to use them in speech or writing afterwards.

Try it

Ask AI for three things together for each key term: a student-friendly definition, an example in context, and a sentence frame that students can reuse. For example, for the word 'parsing': Definition: Reading data and breaking it into smaller parts the computer can work with. In context: When the program reads a JSON file, it parses the data into key-value pairs. Sentence frame: We use parsing when we need to...

Building Reading, Speaking, Writing, and Listening Scaffolds

Scaffolding makes challenging tasks reachable. It helps students read, speak, write, and think more confidently. It does this not by removing challenge, but by providing enough structure to participate and grow.

Skill	Possible scaffolds
Reading	Headings, chunked text, glossary, guiding questions, diagram.
Speaking	Sentence starters, roles, useful phrases, rehearsal time.
Writing	Model answer, paragraph frame, linking words, checklist.
Listening	Key words in advance, short sections, repetition, visuals, note-taking grid.

Scaffolds should support independence, not become permanent. Reduce them when students no longer need them.

AI can help teachers create scaffolds quickly: sentence starters for pair discussion, writing frames for technical explanations, guided note-taking templates, model answers, comparison tables, self-check lists, and prompts for group presentations. These are especially useful in classes where students know more than they can yet express.

The most effective scaffolds are closely matched to the task. A reading task may need a glossary and guiding questions. A speaking task may need prompts. A writing task may need an example paragraph and a checklist for accuracy and clarity.

During the project, generated discussion questions, review checklists, and step-by-step prompts helped students discuss technical topics in English and understand how they would be evaluated. Teachers should also decide when to reduce scaffolding: some learners need strong support early but are ready for more independence later.

Creating CLIL Tasks

Strong lessons do not just explain content. Students should do something with it: sort, discuss, compare, justify, create, explain, or apply.

Task Quality Check

- Is there a clear subject outcome?
- Do students need to communicate to complete the task?

- Is the language support visible and usable?
- Does the task require meaningful thinking?
- Does every student have a role?
- Is there a clear product or decision?
- Is the timing realistic?

A useful way to think about task design is across three stages: before the main task (key vocabulary, activating questions, prediction prompts), during the main task (guided reading, coding challenge, group design task, discussion structure), and after the main task (reflection questions, summary, presentation, transfer activity).

The platform was used this way across several reports. Teachers generated project-based tasks on abstract classes, digital quests on computer networks, challenge-based Java tasks on dates and time, and collaborative design tasks around aggregation and UML. The best tasks asked students to think as well as communicate.

From the pilot

In the computer networks lesson with class 1 EQ (fourteen-year-olds at B1 level), the teacher created an 'Internet and Network Quest', a gamified small-group exploration with collaborative research, quizzes, and group presentations. Students also completed a paired email-writing exercise using five practical scenarios, followed by peer feedback using a netiquette checklist.

Differentiating for Mixed Language Levels

Differentiation is one of the strongest reasons to use AI. In most classes, students start from different places. Some can cope with dense reading and open-ended speaking. Others need shorter texts, more explicit vocabulary support, and more structured output.

- Keep the same core content and vary the language support.
- Use the same task with different sentence frames or planning grids.
- Offer parallel text versions while keeping a shared class discussion.
- Vary the support before varying the expected outcome.
- Provide optional extension rather than unnecessary extra work.
- Use flexible pairing and regrouping.

The project provides several useful models. In some Phase 1 lessons, teachers compared B1 and B2 versions of the same text to observe which improved comprehension while preserving meaning. In the abstract classes work, a simplified follow-up activity was created for students who found the original task or the English too demanding. In class 5 AINF, the teacher deliberately used B2 and C1 versions because the students were ready for them.

AI makes this practical by helping teachers generate parallel materials quickly: one text at B1 and one at B2, one task with sentence stems and one without, one writing frame with heavy support and one with lighter prompts. The class can work toward the same content goal through different pathways.

In practice

Different does not have to mean separate. Often the best differentiated lesson keeps the class working on the same idea, with different levels of support. And good differentiation avoids stigma. Students should not feel that one version is the 'real' task and another is lesser.

Supporting Migrant and Multilingual Learners

The project aimed to support more inclusive teaching for learners who face language barriers, including migrant and multilingual students.

Do	Avoid
Find out what students already know.	Assuming language difficulty means low ability.
Use home languages strategically.	Removing all challenging content.

Do	Avoid
Use visuals, demonstrations, and models.	Asking one multilingual student to translate constantly for others.
Explain local and cultural references.	Treating multilingual learners as one homogeneous group.
Allow planning before speaking.	Correcting every language error during subject discussion.

A CLIL-informed, AI-supported approach can help in several ways: making input more accessible, highlighting core vocabulary, supporting reading and discussion, and providing sentence patterns that make participation easier. This kind of support matters because multilingual learners are often cognitively ready for the topic but blocked by the language in which it is presented.

But inclusion does not mean watering down the curriculum. The aim is access with dignity: meaningful subject content, supported by careful scaffolding, gradual progression, and responsive teaching.

Teachers may also choose to use multilingual strategies where appropriate, such as allowing brief discussion in a shared language before English output, or connecting technical concepts to familiar examples. The teacher remains the one who understands the social and linguistic reality of the class.

Turning Existing Lessons into CLIL Lessons

Most teachers do not need entirely new lessons. They need to make existing ones more language-aware and accessible.

A Six-Step Conversion Process

1. Identify the central content objective.
2. Identify the language students need to understand and participate.
3. Review the source material for density, vocabulary, and cultural barriers.
4. Add input support such as visuals, chunking, or an adapted version.
5. Add structured communication using pairs, groups, sentence frames, or roles.
6. Add a short assessment that makes the content learning visible.

Most lessons already have strong subject content. What they often lack is explicit language planning, clear scaffolding, and opportunities for purposeful communication. Converting a lesson does not mean rebuilding it. It means making the language dimension visible.

AI can help at each stage. But the teacher still decides what should stay, what should change, and what feels natural in the classroom.

Example: Converting a Standard Lesson

Imagine a standard computing lesson on 'Internet Services and Protocols', a topic typically taught through a textbook reading followed by a quiz. Here is how the six-step conversion might look.

Before conversion. Students read a dense C1-level textbook passage about TCP/IP protocols, DNS, and internet services. The teacher explains the content in Italian. Students take a multiple-choice test.

After conversion. Step 1: Content goal. Students understand the role of key internet protocols and can explain what DNS does. Step 2: Language. Key terms (protocol, browsing, cloud storage, server, client) are identified and pre-taught with definitions and example phrases. Step 3: The textbook passage is adapted from C1 to B1 using the Language Tools converter. Both versions are kept for comparison. Step 4: Students work in small groups on an 'Internet and Network Quest': a gamified exploration where each group researches one protocol, then quizzes the others. Step 5: Sentence frames are provided: 'The purpose of [protocol] is to...' and 'This protocol is important because...' Step 6: Students draft a short email using correct netiquette to practise both content knowledge and written communication, then exchange emails for peer review using a checklist.

This example is based on what actually happened in class 1 EQ at the Alessandro Volta Institute. The teacher found that the combination of adapted text, group exploration, and a practical writing task produced stronger engagement than the textbook-and-quiz approach alone.

The strategies in this section were shaped by classroom testing and teacher feedback during the project. The case studies that follow show what happened when teachers applied these approaches: the decisions they made, the tools they used, and what their students said about the experience.

Part Six: Classroom Case Studies

These case studies show real classroom practice: not perfect lessons, but honest ones. They come from project reports and student feedback, and they show how decisions were made, where tools helped, and what teachers learned. They are ordered roughly by student language level, from B1 through to C1.

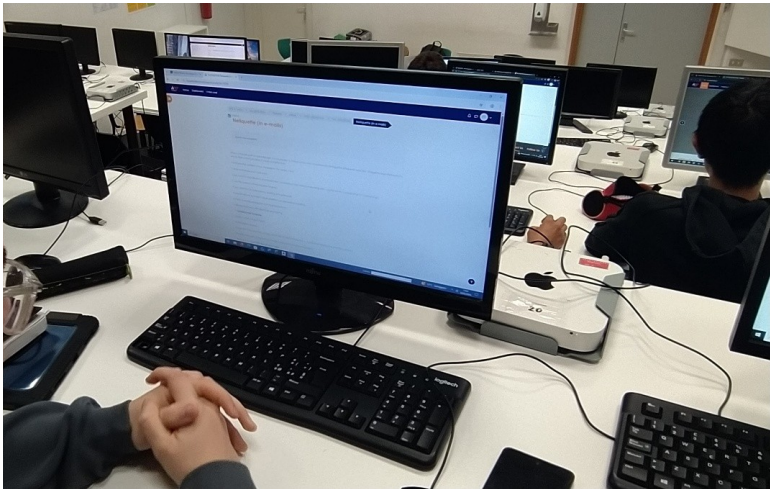
Italian class codes identify the year group and study pathway. For example, 4 AINF is a fourth-year ICT class. Teacher and student comments are drawn from project reports and questionnaires. Where comments were translated from Italian, the wording has been kept as close as possible to the original meaning.

Case Study 1: Computer Networks and Netiquette

CLASS	1 EQ, Electronics; 10 students aged about 14; B1 English
SUBJECT	Computer networks, internet services, and netiquette
TEACHER	Laura Rosati, Alessandro Volta Institute
DURATION	Two sessions: 104 minutes and 50 minutes

This was a B1-level class of young students encountering technical English for the first time in a structured way. The teacher began by uploading resource documents about internet services and computer networks to the platform, which assessed the original text as C1 level. She then used Language Tools to adapt the content down to B1 by simplifying vocabulary, shortening sentences to an average of 10–15 words, and restructuring with clear headings and bullet points, while keeping the core technical content intact.

The platform generated two activities: an 'Internet and Network Quest' (a 90-minute gamified group exploration) and a Netiquette Email Writing Task. It also produced a key vocabulary list (internet, services, browsing, communication, resources, cloud storage) with language structures and example phrases. The teacher found the vocabulary list and the Read Aloud pronunciation feature especially useful for these younger learners.



Class 1 EQ working on the platform during the computer networks lesson.

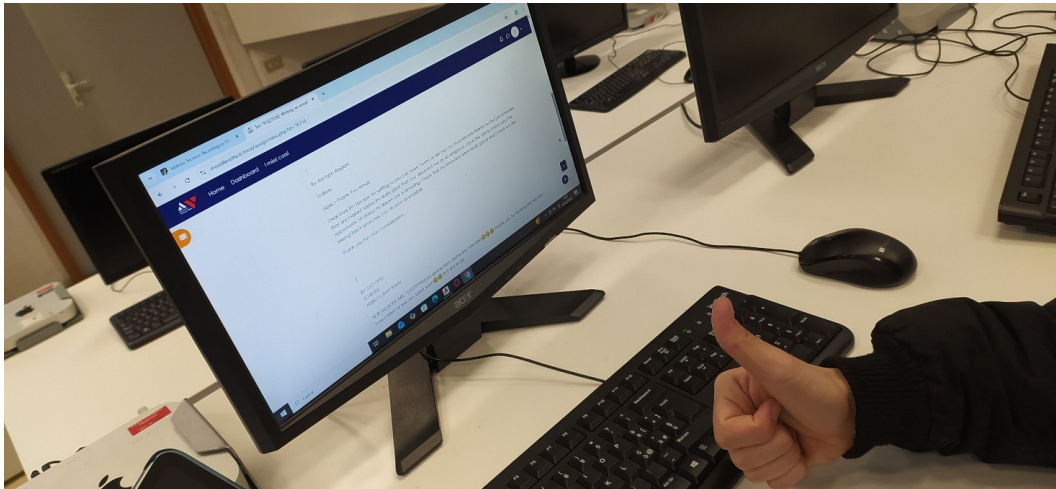
For the email task, students worked in pairs. Each pair drafted two emails: one demonstrating proper netiquette and one deliberately including common mistakes, using scenarios like requesting time off, following up on a job application, and coordinating a group project. They then exchanged emails for peer feedback using an eight-rule netiquette checklist. The teacher also used the platform to generate an interactive HTML/JavaScript multiple-choice test with animations, hover effects, and a real-time score counter, all in Italian, which she shared on the school's official learning platform.

"It was very useful to have a list of Key Vocabulary to introduce in class at the beginning of the lesson."

by Laura Rosati, teacher

"I used this tool to translate the Italian texts to an English level suitable for the students. The original assessment established that the text was C1 level. It was translated to a B1 level."

by Laura Rosati, on using Language Tools



A student in class 1 EQ working with the platform in the school lab.

In practice

When working with younger or lower-level learners, the combination of adapted text, vocabulary pre-teaching, and the Read Aloud feature provides three reinforcing layers of support. Students see the word, hear it pronounced, and encounter it in context.

WHAT TO TAKE FORWARD

For younger B1 learners, combine an adapted text, a small vocabulary set, and one practical communication task. Test synthetic pronunciation before class.

Case Study 2: jQuery and Parallel Text Comparison

CLASS	4 AINF; 19 students aged about 18; B2 English
SUBJECT	jQuery and web programming
TEACHER	Laura Rosati, Alessandro Volta Institute
FOCUS	Parallel B2 and B1 text comparison

This was the first time this teacher had used an English text with this class, and students were anxious. The teacher deliberately chose a short text: an explanation of what jQuery is, why libraries matter, and how cross-browser issues affect web development, as a manageable entry point.

Students were given two versions: one at B2 level and one adapted to B1. The B1 version shortened sentences, simplified vocabulary, and replaced rare words while keeping the core explanation. Students read both, identified unknown words and difficult phrases, and compared the two.

The jQuery library is helpful for managing different web browsers. Browsers can have issues that affect how they support DOM specifications. Some browsers may offer only partial support, others might have incorrect implementations, and some provide different methods for coding. Writing code to address these differences requires knowledge about each browser to manage the issues correctly. Additionally, certain tasks, like drag-and-drop actions for graphical elements or other advanced effects, can be quite complicated and involve a lot of code. Using a framework or library for JavaScript can simplify these tasks, letting developers focus on creating the desired features of their web applications. There are many frameworks and libraries for JavaScript, including well-known names like Angular, Bootstrap, jQuery, and React. These tools are popular, well-supported, and documented by a large developer community. Here, we will focus on jQuery. JQuery is a free library for JavaScript available at <https://jquery.com>, designed to make it easier to work with HTML documents across different browsers, while keeping code efficient and lightweight. The name 'jQuery' reflects its main purpose: to simplify the process of querying elements in the DOM of a web page in a consistent and straightforward way.

A student's annotated jQuery (B2) text, with words like 'issues', 'querying', and 'DOM' marked as difficult.

The results were encouraging. Students consistently reported that the B1 version was more direct, less intimidating, and easier to understand. Their specific feedback identified exactly where barriers lay: words like 'querying,' 'DOM,' 'lightweight,' and 'straightforward' in the B2 text, and 'dragging,' 'advanced,' and 'features' in the B1 text. One student observed that the B1 version used a 'simplified lexicon allowing comprehension of more words, for example, mistakes instead of issues.' Another noted it was 'more compact and understandable with additional explanations.'

"Students were quite scared about studying computer science in English, but then they showed to have quite understood the text."

by Teacher observation

In practice

A simpler text does not mean simpler thinking. It means better access. Track which specific words cause difficulty. This tells you exactly what to pre-teach next time.

WHAT TO TAKE FORWARD

Parallel texts can reduce anxiety and also create a useful language-awareness task. Ask students to identify the exact words and structures that change difficulty.

Case Study 3: AI Bias, Language, and Cultural References

CLASS	3 AINF; 14 students aged about 17; B1-B2 English
SUBJECT	Bias in artificial intelligence
SOURCE	Official computing textbook
FOCUS	Meaning, language level, and cultural accessibility

This lesson was different from the procedural computing topics elsewhere. It asked students to understand both a technical concept (how machine learning systems absorb bias through training data) and its social implications. The teacher introduced the topic through a B1 version first, then a B2 version, so students could compare the two.

The B2 text was significantly longer (603 words versus 416 in the B1 version). After reading, students completed a structured eleven-question survey asking whether meaning was maintained between versions, which sentences were most difficult, and whether their challenges came from the content or the language itself.

Several students were unfamiliar with the reference to *The Great Gatsby*. In the available responses, nine of fourteen students made a broadly appropriate connection between the cultural source material and the risk of bias in AI training data, while five could not explain the reference. The episode showed that cultural accessibility can matter as much as vocabulary or sentence complexity.

The teacher noted that this activity was more effective than teacher-led instruction alone because students read the text carefully and repeatedly, engaging with both the content and the language.

"This is what surprised me most about the tool: by dividing the text into paragraphs and comparing them between B1 and B2, there is no loss of important information."

by Teacher observation

WHAT TO TAKE FORWARD

A text can be linguistically accessible and still exclude learners through unfamiliar cultural references. Check both language and assumed background knowledge.

Case Study 4: Advanced Learners. Relational Databases at C1 Level

CLASS	5 AINF; 12 students; B2-C1 English
SUBJECT	Relational DBMS rules and Codd's thirteen rules
SOURCE	Official computing textbook
FOCUS	B2-C1 comparison for advanced and examination-level learners

This lesson deliberately tested whether AI adaptation could support advanced learners rather than only simplifying content for weaker ones. The class was small, academically strong, and close to their state examination, so the teacher chose to work with B2 and C1 versions of a demanding text on relational database rules, structured as Codd's thirteen rules, numbered from 0 to 12 for easy comparison. A B1 version was prepared but deliberately withheld.

Students were asked not only whether they preferred one version but also to respond to serious content questions. They identified unknown terms, explained what was meant by 'missing information' in database context, and unpacked a particularly dense sentence about treating base tables as operands for data operations.

Students worked with notable independence and concentration. The numbered structure of the rules helped them compare versions rule by rule. Because the topic was directly relevant to their upcoming state examination, the activity carried strong motivational weight. The teacher told students the activity would help prepare them for the interdisciplinary interview portion of their exam.

The teacher reported that almost all students received additional credit for their work and would have continued writing if more lesson time had been available.

In practice

Sometimes the value of adaptation is not that students need the easiest version. It is that comparison between versions sharpens how they read. This approach is particularly powerful for exam preparation.

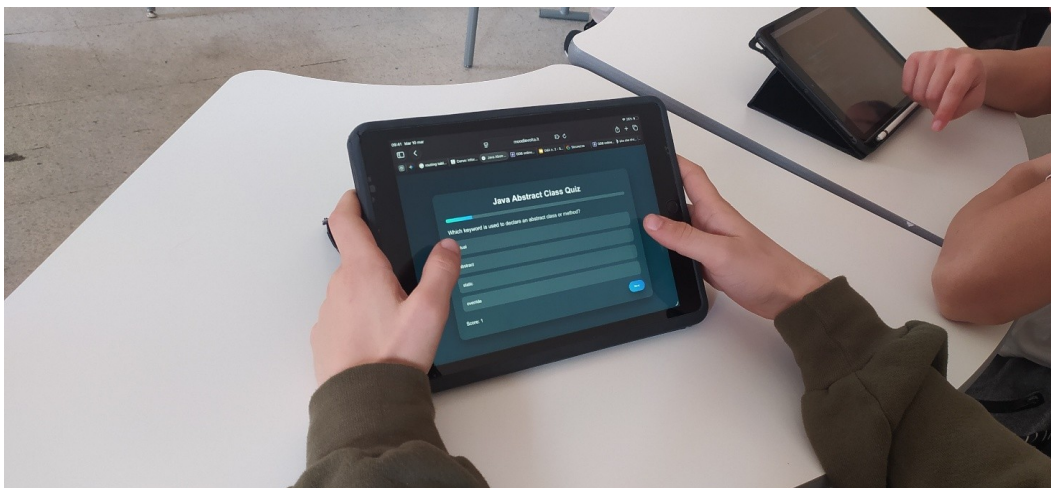
WHAT TO TAKE FORWARD

Text adaptation is not only simplification. Comparing B2 and C1 versions can sharpen close reading and prepare advanced students for examinations.

Case Study 5: Building Access Pathways. Abstract Classes in Java

CLASS	4 AINF; 19 students aged about 18; B2 English
SUBJECT	Abstract classes in Java and pair programming
TEACHER	Laura Rosati, Alessandro Volta Institute
DURATION	Two sessions: two hours and one hour, March 2026

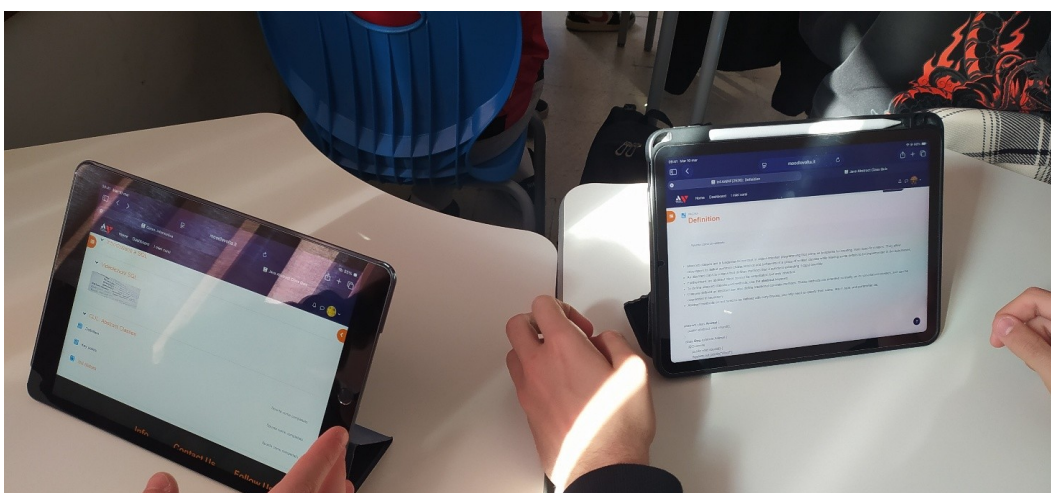
Students were assigned a project-based task in which they designed and implemented abstract class structures for real-world applications. Working in groups, they chose from five application scenarios: a gaming application, a banking system, an e-commerce platform, a transportation system, or a scheduling application. Then they created class hierarchies, wrote Java code, and presented their solutions.



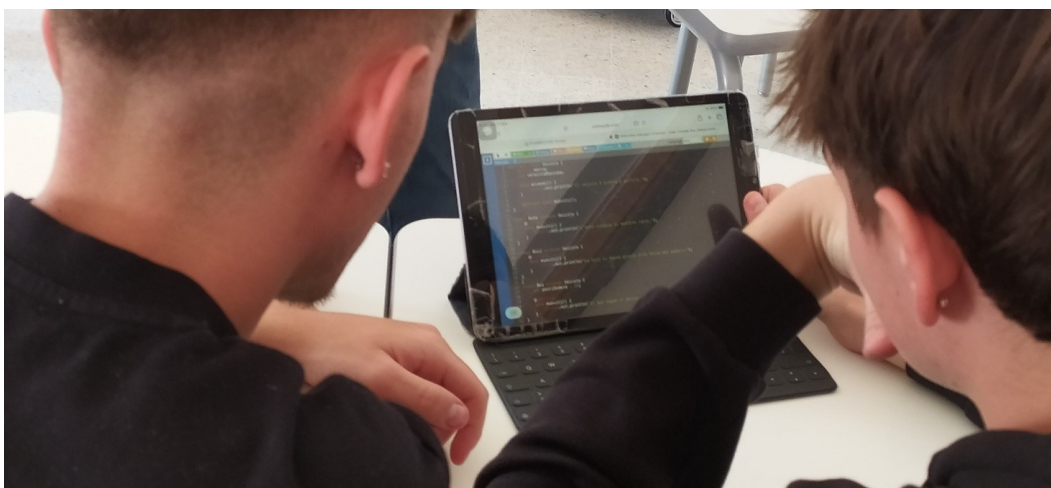
Class 4 AINF doing the platform-generated quiz on iPad during the abstract classes activity.

The platform supported the main lesson and then, in a second session, generated a simplified explanatory activity for students who had difficulty with the English or the concept itself. The simplified material used familiar examples: Animal and Vehicle as abstract classes, before returning students to the broader coding task. Rather than creating separate classes as the standard task required, struggling students extended provided abstract classes with concrete implementations, building confidence step by step.

The teacher used the simplified material not as a separate track but as an access layer. Students could revisit the idea of an abstract class as a blueprint, see concrete examples, and rebuild understanding through guided extension. The simplified follow-up proved useful for everyone, not only those who had initially struggled.



Two students working on iPad during the abstract classes project, one in dark mode and one in light.



Pair programming on iPad during the abstract classes project.

WHAT TO TAKE FORWARD

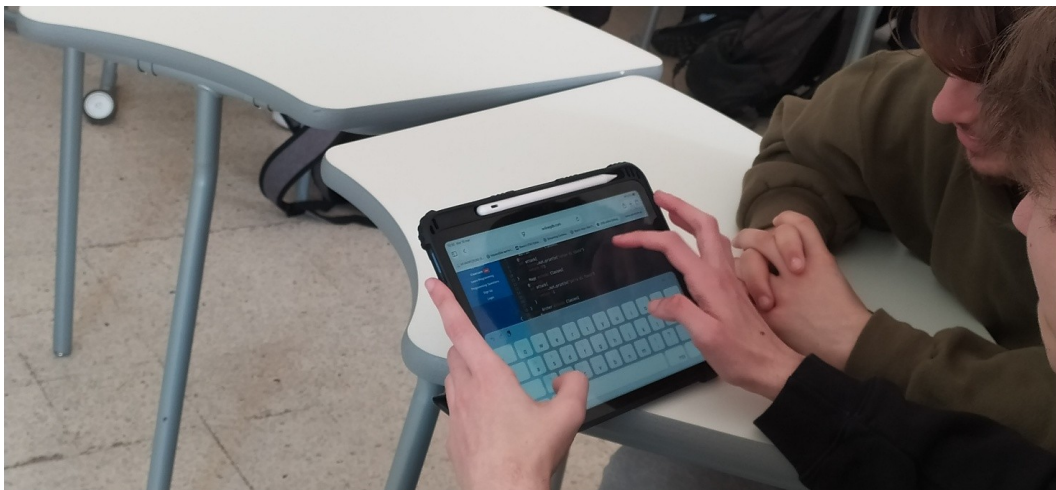
A simpler follow-up can provide a route back into the original challenge. Keep the concept, reduce the language load, and reconnect learners to the main task.

Case Study 6: From Generator to Classroom. UML and Aggregation

CLASS	4 AINF; 19 students; B2 English
SUBJECT	UML design and Java aggregation relationships
FORMAT	Vocabulary, modelling, group programming, and review
DURATION	Three sessions, November 2025

This case shows the full workflow from platform to classroom across multiple sessions. On 4 November, the teacher began with a brainstorming activity using vocabulary from the platform's Language Objectives section, then led a collective UML diagram design for a warehouse management example. Students were assigned a consolidation exercise to practise independently.

On 12 November, with external observers present, students worked in groups on iPads, tackling five different learning tasks: Hotel Management, Music Quiz, Sports League Manager, Fitness Tracker, and Video Game Inventory. Each task required designing a UML diagram, implementing Java classes with aggregation relationships, and documenting the code. The platform-generated review checklists and discussion questions helped students understand both what was expected and how they would be evaluated.



Group work on the UML and aggregation task, November 2025.

The teacher found that the platform-generated discussion questions were particularly effective for getting students to talk about technical concepts in English. Questions like 'How did the UML diagram clarify the relationships between objects?' and 'Why is aggregation important in managing data?' prompted genuine technical discussion rather than rote answers.

On 13 November, students completed their projects and received grades based on the assessment rubric. The teacher's decision to weight collaboration and participation at 4 out of 10 points, double the weight of any other criterion, reflected a deliberate pedagogical choice: in CLIL, the willingness to communicate and cooperate matters as much as the technical output.

"The AI activity generator is terrific! It greatly supported me in designing both CLIL lessons and assessment tasks."

by Teacher evaluation

In practice

When using platform-generated rubrics, do not hesitate to change the weightings. The generated criteria are useful starting points, but your professional judgement about what matters most for your class should always come first.

WHAT TO TAKE FORWARD

The most useful workflow was iterative: generate, model together, test through group work, then adjust criteria and follow-up support.

Case Study 7: Phase 3 Classroom Shadowing. Three Approaches to One Platform

CONTEXT	Phase 3 visit to Perugia, 10-13 November 2025
CLASSES	Three ICT classes with different teaching approaches
OBSERVERS	Teacher Academy Ireland project team
FOCUS	Student-led projects, interactive text, and direct instruction

Classes: Three separate groups observed across one morning

Context: Phase 3 visit to Perugia, 10-13 November 2025

Observers: Patrick O'Hare and Tomasz Laskowski, Teacher Academy Ireland, Dublin

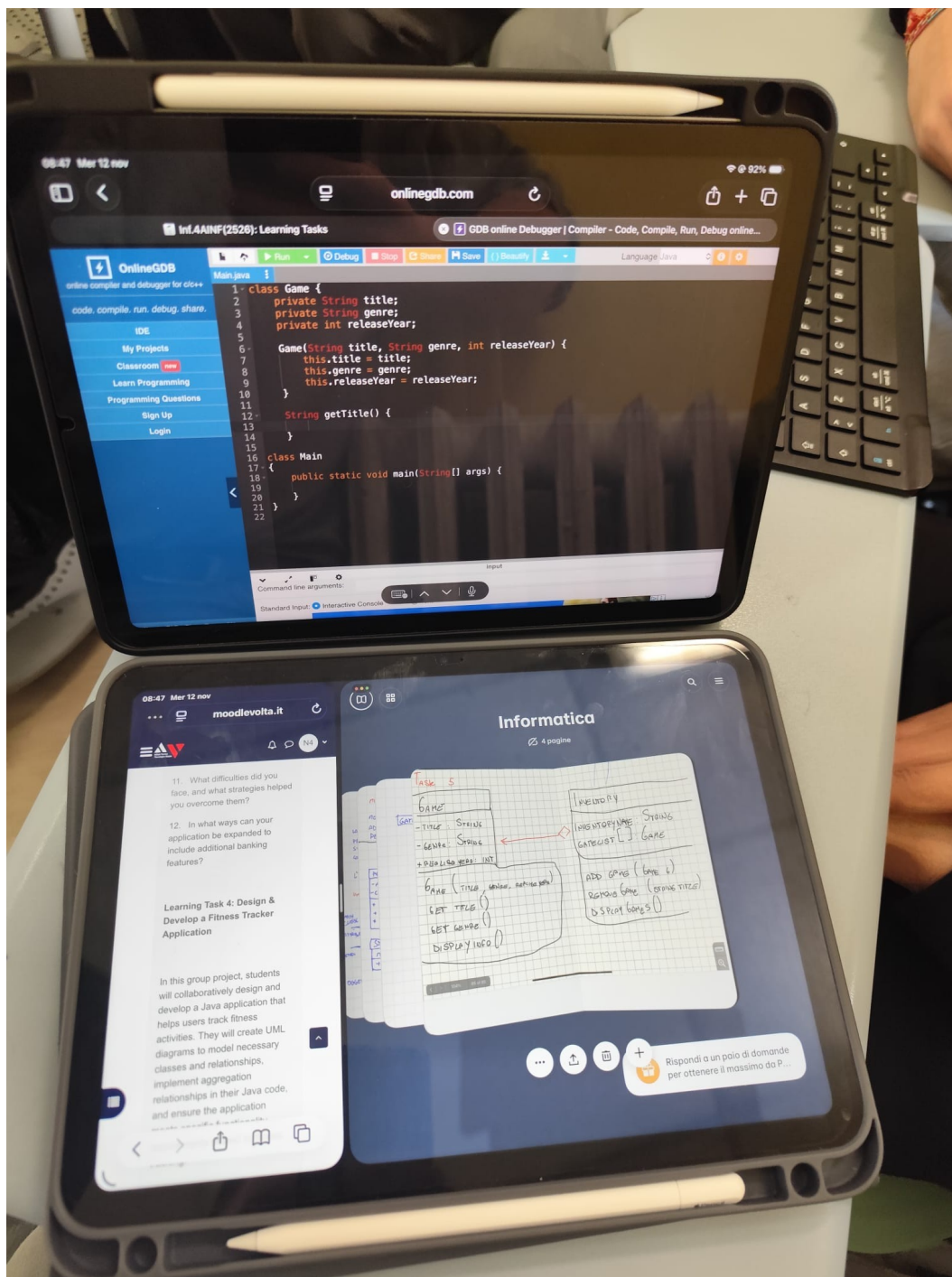
Teachers: Laura Rosati, Frida Valecchi, Francesco (surname withheld)

During Phase 3 of the project, the Teacher Academy Ireland team spent a morning observing the AI-CLIL platform in use across three different classrooms at the Alessandro Volta Institute. What made this visit particularly valuable was that each teacher used the same platform in a completely different way, without any coordination between them. The result was a natural demonstration of how a single tool can flex across teaching styles, student levels, and subject areas.

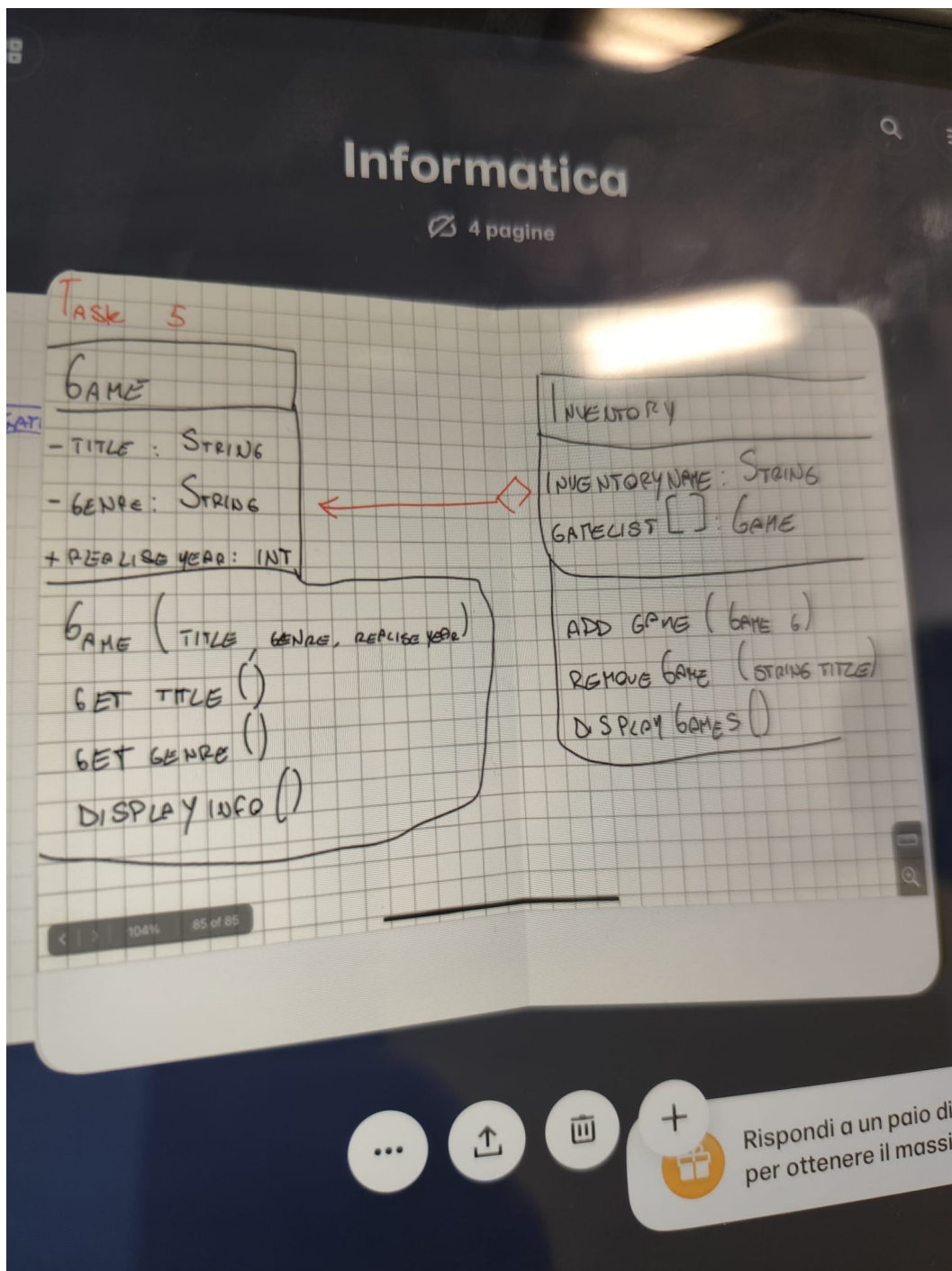
Class 1: Student-Led Java Projects (Laura)

In this class, students worked in small groups on Java programming projects, each tackling a different real-world application. The platform had been used beforehand to generate structured learning tasks, and each group was working from platform output that gave them a clear brief, UML structure, and coding objectives.

Group 1 built a Calorie Tracker application, using the platform's output to organise categories, user actions, and overall flow before they started coding. Group 2 created a Music Quiz, with one student coding while the other prepared the UML structure generated through the platform. Group 3 developed a Hotel Management system for booking rooms, checking availability, and calculating stays, with two students on code and two on UML. Group 4 planned a Sports League application using the platform to model team classes and data arrays. A fifth group worked on a simple Java game, using the platform to outline class types and basic structure.



A student working on the Hotel Management Java project during Phase 3 observation, with platform brief and handwritten UML notes side by side.



A student's handwritten UML diagram for the Java game project (Task 5), worked out from the platform brief.

What stood out was how naturally students used English throughout the activity. When asked about working in a second language, their responses reflected a range of comfort levels but a shared willingness to engage:

"We use English sometimes in class, so doing this in English was okay for me."

by Student, Group 1

"It's useful for us. Speaking and coding in English helps us improve."

by Student, Group 2

"English is important for our future, so I like practising it this way."

by Student, Group 4

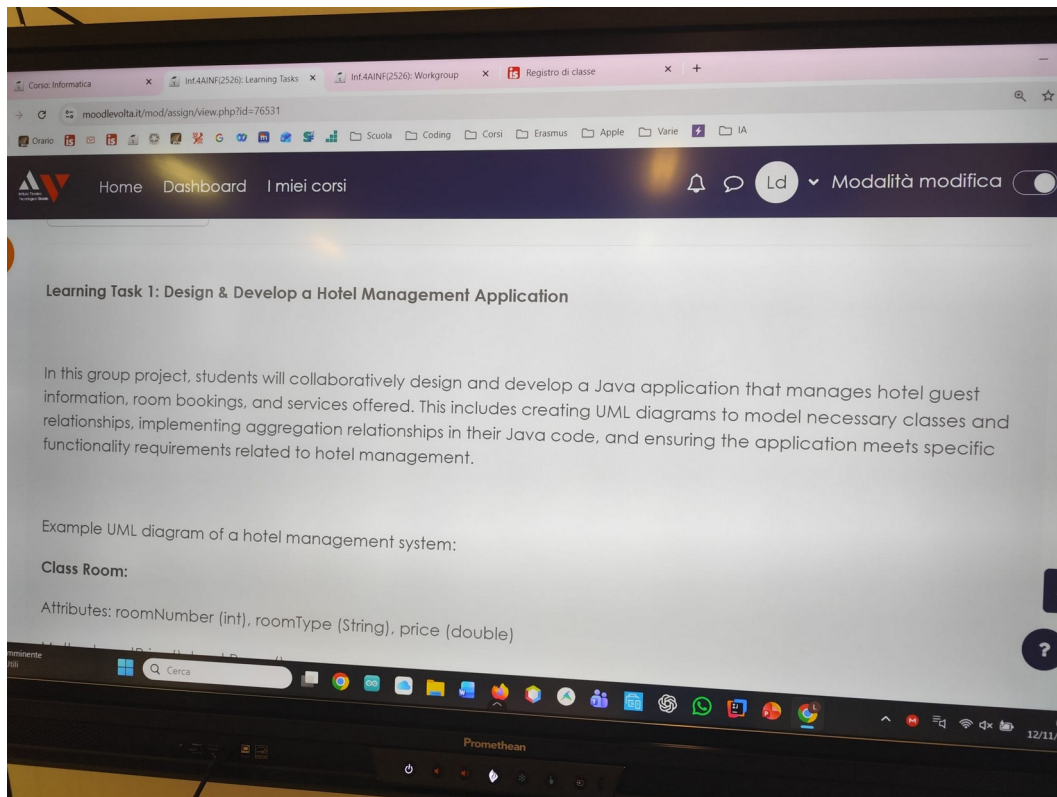
"No problem for me."

by Student, Group 3

"For me it's okay and helpful."

by Student, Java game group

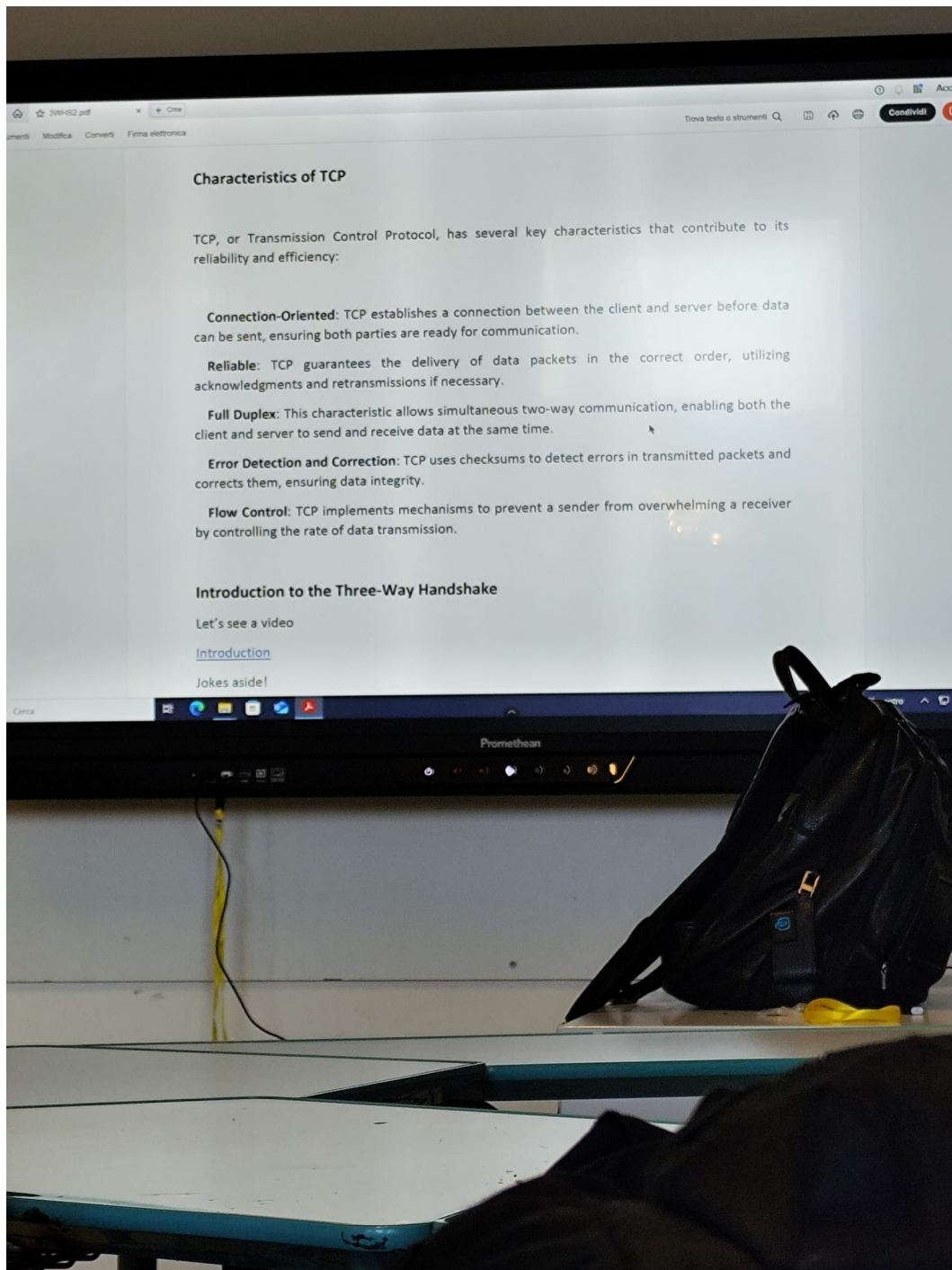
Some students found the language more challenging, with one noting it was 'a little too difficult,' but even those students stayed engaged and completed their tasks. The platform gave each group enough structure to work independently, which freed the teacher to circulate, check progress, and support where needed.



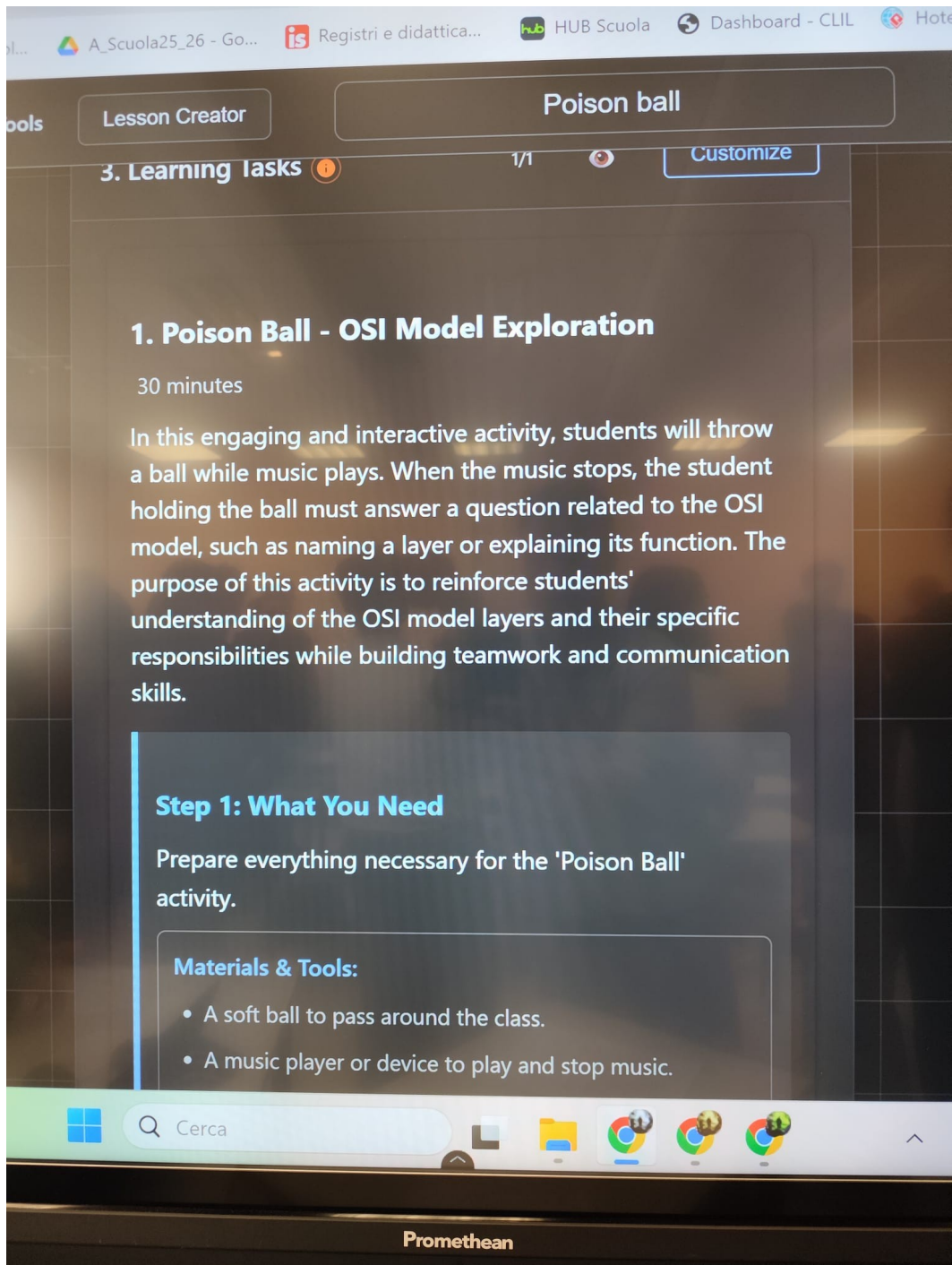
Learning Task 1 - Hotel Management. One of five project briefs the platform generated for the class.

Class 2: Poison Ball and Interactive Text (Frida Valecchi)

This class took a completely different approach. The teacher used the platform to generate a short text about TCP (Transmission Control Protocol), then built a lively classroom activity around it. The activity, called Poison Ball, worked like this: a student held a ball and read part of the text aloud. The student to their right then asked the student to their left a question based on what they had just heard. Music played, the ball moved around the room, and the cycle repeated. It was fast, engaging, and got every student involved.



The platform's text on TCP, projected during Frida Valecchi's Poison Ball activity.



Poison Ball: OSI Model Exploration - the activity as generated in the Lesson Creator.

During the lesson, Frida flagged several concrete issues that fed back into the platform development cycle. They were specific enough to act on directly:

- A discrepancy between what the teacher had asked the platform to produce and what it actually generated.
- The platform did not fully recognise that TCP belongs to the transport layer, which caused a small context mix-up.
- The Content Objectives output for that lesson needed checking; Frida had the specific generated file.
- JSON output for one activity was not rendered as HTML, so it appeared as raw code on screen rather than as a formatted student task.

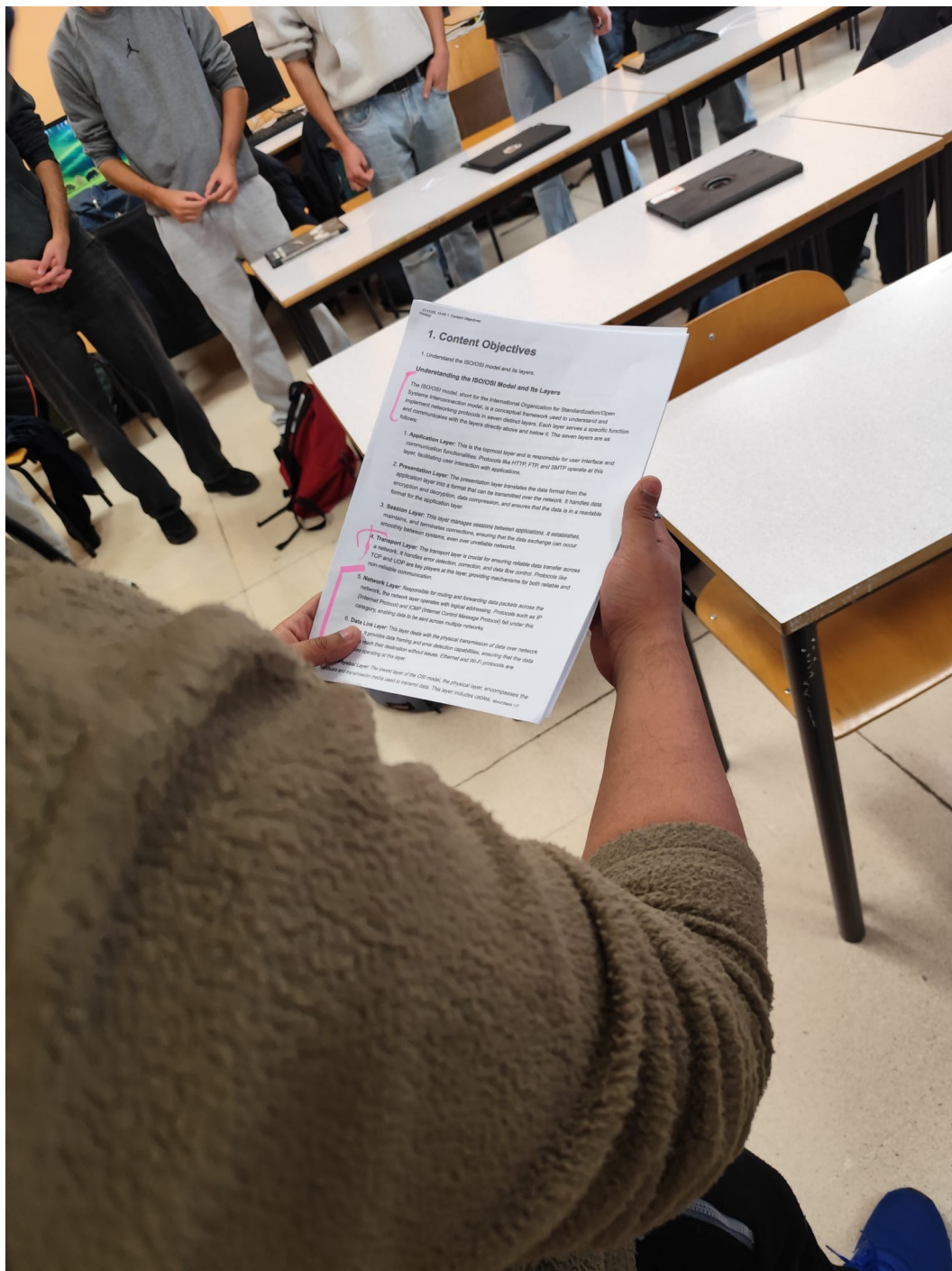
These findings were exactly the reason the team chose to shadow real classes during Phase 3. They provided clear, targeted improvements that would have been missed in any amount of lab testing. Each issue was logged and fed directly back into the platform development cycle.

In practice

The Poison Ball activity shows how a single AI-generated text can become the basis for a dynamic, student-centred task. You do not need elaborate materials. A short text, a ball, and some music can create an activity where every student speaks, listens, and thinks on their feet.

Class 3: Direct Instruction and Presentation Mode (Francesco)

The third class showed the platform being used in a more traditional, teacher-centred way. The teacher projected the platform output on the screen and used it as presentation material, guiding the class through definitions and key points. There was less student interaction than in the other two classes, but the approach was deliberate: for this topic and this group, the teacher judged that structured, guided delivery was what students needed.



During the lesson, one technical issue appeared: the platform generated content formatted as a multiple-choice activity when the teacher had not intended that. This gave the development team something concrete to review and improve. More broadly, seeing the platform used in this presentation style highlighted that some teachers want structured, presentation-ready material rather than interactive student tasks. This feedback is now shaping plans for features that better support a teacher-centred delivery mode.

What This Visit Showed

Three teachers, three classrooms, three completely different uses of the same platform. Laura used it to structure independent group projects. Frida turned a generated text into a fast-paced speaking activity. Francesco used it as a teaching aid for direct instruction. None of them had coordinated their approaches, and that was the point. The platform was flexible enough to support each teacher's natural style, rather than forcing them into a single way of working.

The visit also produced a concrete list of platform improvements, from cloning lessons instead of overwriting them, to adding folders, text-to-speech, multi-language translation, and better handling of technical subject context. Several of these improvements arose directly from watching real teachers use the tool with real students.

"We try to speak English, even if it's difficult."

by Student feedback during Phase 3 observation

In practice

If you are trialling a new tool or resource, invite a colleague to observe your class. A second pair of eyes catches things you will miss when you are busy teaching. The most useful feedback from this project came from classroom observation, not from surveys or forms.

WHAT TO TAKE FORWARD

The same tool supported very different teaching styles. Platform output worked best when the teacher selected, reshaped, and staged it for the room in front of them.

Case Study 8: AI Applications and Benefits in Daily Life (4 CINP)

CLASS	4 CINP; computer science; B2 English
SUBJECT	AI applications and benefits in daily life
TEACHER	Frida Valecchi, Alessandro Volta Institute
DURATION	Three linked sessions, January-March 2026

This lesson took a different shape from the other case studies. Instead of starting with a source text, the teacher started with the students' own experience: where had they actually met artificial intelligence in their daily lives, and what had it done for them? Three sessions across January and March were given to the topic.

In the first phase, students brainstormed individually, writing down as many concepts as they could think of related to AI applications and benefits drawn from their own use and needs. The platform then produced a summary text from the pooled concepts. This served two purposes: it gave the class a shared reference point in English, and it surfaced gaps - the topics the brainstorm had skimmed over and that the class should explore in more depth.

The class was then divided into working groups. Each group took one aspect from the summary and developed it into a short written report. The final product for each group was a podcast of up to ten minutes, in which group members spoke in dialogue, presenting their concepts and opinions. The dialogue format was deliberate: it pushed students into the language of explaining, agreeing, disagreeing, and asking questions, rather than reading from a prepared script.

The content objectives were that students should understand a range of AI applications and the benefits they bring, and that they should collaborate effectively within their group on one specific aspect. The platform supported each of these - the summary text gave the brainstorm structure, the activity formats gave the group work scaffolding, and the audio dimension gave the language a real, communicative purpose.

A parallel activity, 'Discover and Podcast!', ran in classes 5 CINF and 5 DINF in March 2026 on the same model. Students researched one of six contemporary internet technologies - Starlink, in-vehicle LAN, Galileo for GPS, PAN, Neuralink, or quantum internet - produced a research document, and then recorded a dialogue-style podcast showing different perspectives. Three 50-minute sessions were used for each group's research and recording.

A note about the podcast as a final product: a ten-minute spoken dialogue forces students to do something that a written report does not. They have to hold a conversation about a technical subject in English, negotiate turns, react to each other, ask clarifying questions, and recover from mistakes in real time. For a CLIL class, that combination of subject competence and communicative competence is exactly the kind of integrated outcome the methodology aims at.

Alongside the teaching, Frida used these sessions to test new platform features as they rolled out. Clone on Save, the lesson-aware generator and chat, lesson deletion, the organisation and sharing system, the class settings reorganisation, text-to-speech, multi-account access, and the multi-language interface were all exercised in real classroom use. Two narrower issues with text-to-speech were flagged: dictation in the Chat Assistant occasionally returning previously deleted text, and dictation in the Customize section overwriting earlier dictation. A separate issue surfaced with the Chrome extension when it tried to save YouTube videos as resources, sometimes hitting rate-limit errors from Google's services. These were exactly the kinds of findings that classroom use surfaces and lab testing does not, and each one was logged for the development team.

"The podcast format made students speak about technical content in English without a script. That is harder than reading a report aloud, and it is the point."

by Teacher reflection

WHAT TO TAKE FORWARD

Starting from students' own experience gave the topic a purpose. AI then helped organise ideas, not replace them.

Case Study 9: Implementation Lessons: Onboarding and Reliability

CLASS	4 DINF; computer science; B2 English
SUBJECTS	JSON and Java; AI types and ethics
TEACHER	Francesco Casinini, Alessandro Volta Institute
FOCUS	Onboarding, generated resources, and link reliability

Subjects: JSON and Java (April 2025); AI Types and Ethics (May–June 2025)

Teachers: Volta Computer Science staff, including Francesco Casinini

Dates: 29 April 2025 (JSON and Java); 20 May 2025 and 5 June 2025 (AI Types)

This case study covers the Phase 2 pilot of the Activities Generator in class 4 DINF, run across two separate teaching strands in spring–summer 2025. It is included here partly for the teaching it represents and partly because of what it reveals about the tool when a teacher joins the pilot late and meets the platform without the long lead-in that other Volta colleagues had.

JSON and Java (April 2025)

In the first strand, the platform was used to generate a structured B2-level CLIL activity on the JSON data format and its use in Java programming. The teacher walked the class through the platform interface, set parameters (language level, age, class settings) collaboratively, and tested usability including iPad access. The platform produced a three-hour activity in five sections - Content Objectives, Language Objectives, Learning Tasks, Assessment Criteria, and Deep-Learning extension material - covering parsing, serialisation, and key-value structures.

Key vocabulary surfaced by the platform included JSON, parsing, serialisation, data structure, API, object, array, and key-value pair. Sentence frames such as "How does JSON function as a data format?" and "In what contexts might we use serialisation in Java?" gave students ready language for the discussion phase. The teacher refined the generated activity by adding specific needs - free Java libraries for reading and writing JSON files - and structured the work in two phases: first on JSON basics, then a small Java programming project in which students imported a JSON file and saved program settings back into an output JSON file.

AI Types and Ethics (May-June 2025): Checking AI-Generated Resources

In the second strand, Francesco Casinini joined the experimentation later in the year, having previously been engaged in his PhD programme. His report on the experience is unusually candid and worth quoting at length because it surfaces a real onboarding problem that the rest of the handbook largely glosses over.

"I was included in the experimentation phase at a rather late point in the year, as I had previously been engaged in my PhD program. This 'late entry' certainly caused some initial difficulty on my part in understanding how to build the activities. This could perhaps serve as a starting point for suggesting some ideas to make the explanation of how to use the tool simpler."

- Francesco Casinini, Phase 2 report

Casinini was given a 20-minute tutorial video covering the whole tool. He found the video comprehensive but hard to follow because it covered many topics at once, including advanced ones, and recommended that it be split into shorter, scenario-specific clips: introduction and basic elements; activity generation; general editing of activities; editing a specific activity. The point generalises beyond his class: a tool that takes 20 minutes to introduce in one go is not friendly to a teacher who only has occasional time and wants to come back to a particular section.

On the generated content itself, Casinini flagged a more serious issue: many of the multimedia links in the platform's suggested resources led to pages that were no longer active. He gave a worked example of an AI Types activity in which suggested links to Khan Academy, a TED talk, a Harvard Business Review article, a YouTube video, and Canva all needed to be checked or replaced. The platform had generated plausible-looking resource suggestions; some of them were simply dead. This is recorded honestly in the handbook (see "Known Issues and Workarounds" in Part Four - broken multimedia links) and his report was a direct source for that warning.

Despite the friction, Casinini's overall judgement was constructive: he wrote that the tool "can offer valuable support to teachers and enhance the quality of activities for students", and that he looked forward to testing it more extensively in the following school year and to contributing to its development.

What this case study shows

Two things, both useful for any teacher reading this handbook.

First, a single AI-CLIL platform can be picked up at very different points in a school year by different colleagues, with different levels of induction. The Volta teachers who worked with the tool from kickoff onwards had a year of context that Casinini did not. If your school plans to spread an AI tool across a teaching team, plan the onboarding seriously - broken into short, task-specific videos, with one or two colleagues already comfortable enough to answer "how do I..." questions in person.

Second, AI tools can produce plausible-looking content that turns out to be wrong on inspection. Broken or hallucinated links are the most common failure. Build link-checking into the lesson preparation routine. The platform is honest about this - both in this handbook and in the project's development cycle - and Casinini's report is one of the reasons it can be.

School-Level Implementation Checklist

- Provide a short, task-specific induction rather than one long tutorial.
- Give teachers one manageable first task.
- Identify a colleague who can answer practical questions.
- Check generated links and resources before class.
- Save successful prompts and examples, and allow time for trial, feedback, and adjustment.

WHAT TO TAKE FORWARD

Introduce one task at a time and make link checking routine. A plausible resource suggestion is not a verified resource.

Part Seven: Teacher Toolkit

Prompt Bank

A useful planning prompt normally includes the role, learners, subject content, approximate language level, output, constraints, and a checking instruction. The examples below are starting points rather than scripts that must be copied exactly.

Prompt formula: role + learners + content + language level + output + constraints + checking instruction.

Example: You are supporting a vocational computer science teacher. Create a 45-minute CLIL activity on network security for 16-year-old students working at approximately B1 English. Include one content objective, two language objectives, six key terms, a pair task, sentence frames, and a five-minute exit check. Keep technical meaning accurate and identify anything the teacher should verify.

In practice

Save your best prompts. Small adjustments to a proven prompt are usually more effective than writing a new one from scratch every time.

For Adapting Texts

"Adapt the following text to B1 level for upper-secondary learners studying computer science through English. Keep the key technical meaning, shorten long sentences, and replace less common words where possible. List any technical terms that should still be pre-taught."

"Create three versions of this text at B1, B2, and C1. Keep the core ideas stable across all three. Then explain in a short note what changed in vocabulary, sentence structure, and density."

"Rewrite this text for classroom comparison. Produce the original and a more accessible version, plus five discussion questions asking students to compare wording, meaning, and difficulty."

For Vocabulary and Language Support

"Extract the ten most important terms from this text for B1 learners. For each, give a student-friendly definition and one example sentence connected to the topic."

"Create a vocabulary support box for a CLIL lesson on [topic]. Include key words, simple definitions, likely confusing terms, and two sentence starters for pair discussion."

"Generate language support for this lesson. Include language of learning, language for learning, and language through learning. Keep it practical and classroom-ready."

For Activities and Tasks

"Generate a 45-minute CLIL activity on [topic]. Include a short warm-up, a main collaborative task, language support, and a short reflection."

"Create a group task for students learning [topic]. Include content goals, language goals, materials, step-by-step instructions, possible difficulties, and wrap-up questions."

"Turn this technical reading into a three-stage lesson: pre-reading, while-reading, and post-reading. Each stage should support both content understanding and language use."

For Lesson Planning

"Turn this existing lesson into a CLIL lesson plan. Add one content objective, two language objectives, key vocabulary, lesson stages, scaffolds, and one short assessment check."

"Create a 60-minute lesson on [topic] for mixed-ability learners. Keep the subject challenge high but add language support where needed. Include teacher notes for likely problem points."

For Differentiation

"Create three versions of this task for learners at lower, middle, and higher English proficiency. Keep the same core topic but vary the support and output demands."

"Generate a simplified follow-up for learners who found the first task too difficult. Keep the same topic, reduce the linguistic load, and make the instructions more direct."

For Assessment

"Create a short formative assessment for this CLIL lesson. Include three content-check questions, two language-check prompts, and one reflective exit ticket."

"Generate an assessment rubric for a group coding task. Include understanding of content, clarity of explanation, collaboration, and use of technical language."

For Pronunciation and Listening

"Generate a list of the ten words in this lesson most likely to be mispronounced by Italian-speaking students. For each, give the IPA transcription and a common mispronunciation to avoid." Verify specialist terms using a reliable dictionary or subject source because AI-generated IPA may be inaccurate.

"Create a short listening comprehension activity based on this text. Include five true-or-false statements and three open questions that check understanding of both content and vocabulary."

For Reflection and Metacognition

"Generate five reflective prompts for students to complete after this lesson. Each prompt should encourage them to think about what they learned, what was difficult, and how the English language affected their learning."

"Create a brief self-assessment checklist for students. Include three content knowledge checks and three language use checks that students can complete independently."

For Checking AI-Generated Material

"Identify any technical claims in this material that require verification."

"Check whether important meaning or qualifications were lost during simplification."

"Identify cultural references that may be unfamiliar to multilingual learners."

"Find any instruction that may be unclear to a B1 learner."

"Check whether the proposed timing is realistic for a class of 24 students."

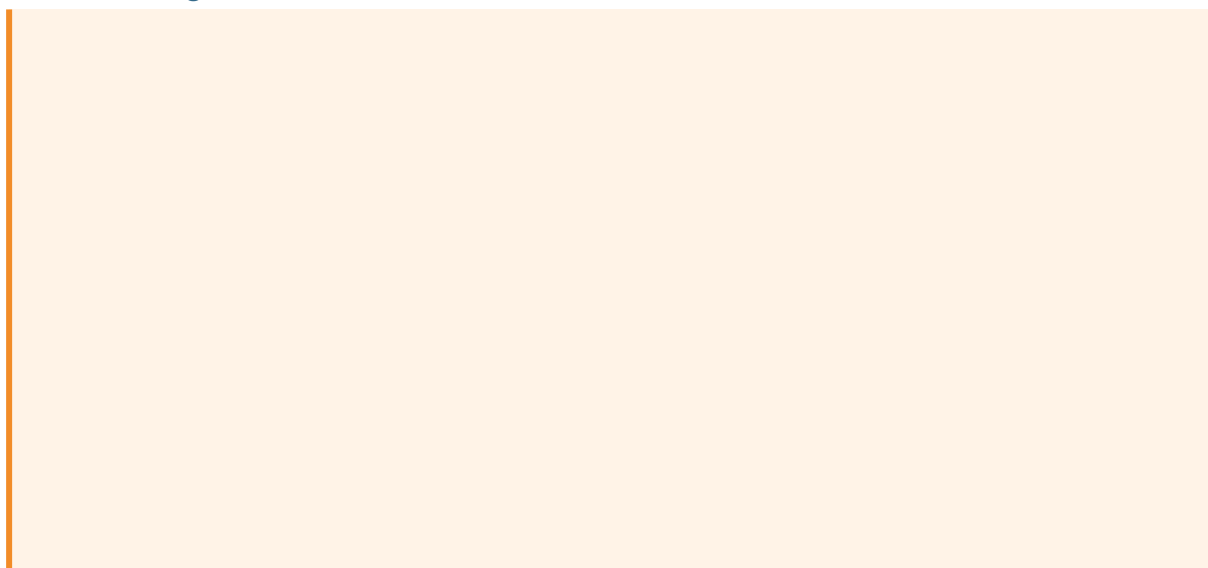
Planning Templates, Checklists, and Rubrics

Topic	
Class / learner profile	
Content objective	
Language of learning	
Language for learning	
Possible language through learning	
Key vocabulary	
Input support	
Main task and final product	
Scaffolds	
Assessment	
Teacher checks	
Additional support	
Extension	

Text Adaptation Checklist

- ☐ Does the adapted text preserve the central meaning?
- ☐ Are essential technical terms and qualifications retained?
- ☐ Are difficult general words changed or explained?
- ☐ Are cultural references accessible or explained?
- ☐ Are sentence lengths and text organisation manageable?
- ☐ Has any important nuance disappeared?
- ☐ Has the teacher checked technical accuracy?
- ☐ Is the adapted text appropriate for this class, not only for a generic CEFR label?

Notes and changes to make:



Post-Lesson Reflection Template

What supported understanding most effectively?	
Where did students still struggle?	
Which scaffold did students use, and which did they ignore?	
Did students use the target language to communicate about the content?	
Was the subject challenge maintained?	
What required teacher refinement?	
What would I keep, change, or remove next time?	
What is worth saving as a reusable prompt or template?	

Sample Dual-Focus Assessment Rubric

Lesson or topic: _____ Class: _____

Date: _____

Area	What to look for
Content understanding	Accurate explanation and appropriate examples.
Application	Ability to use the concept in a task or problem.
Communication	Ideas are understandable and organised.
Technical language	Key terms are used appropriately.
Collaboration	The student contributes and responds to others.

Teacher notes or adaptations:

Part Eight: Putting It Into Practice

Assessment in CLIL with AI Support

Assessment in CLIL should reflect both content understanding and language use. The aim is not to double the workload but to make learning visible. A few principles help:

Decide in advance whether language is being formally assessed or is mainly a means of showing subject understanding. Avoid penalising the same language difficulty in several categories. AI may draft criteria, but the teacher sets the final standard.

- Assess understanding of the subject, not just language accuracy.
- Include opportunities for students to explain, describe, or justify their ideas.
- Use short formative checks during lessons rather than relying only on final tests.
- Provide language support within assessment tasks where appropriate.
- Use rubrics that are clear, simple, and aligned with lesson objectives.

AI can support the creation of rubrics, checklists, and formative prompts, but these should always be reviewed. In the project, one teacher used a platform-generated rubric for group coding work but modified it to give more weight to collaboration and participation. This is a good example of AI as a starting point, not a final answer.

In practice

A short, well-designed exit question can reveal more than a long test.

Your First 20 Minutes

Begin with one small, useful change rather than a complete AI-generated course.

1. Choose one text you already use.
2. Generate one more accessible version.
3. Compare the source and adapted versions yourself.
4. Select six essential words.
5. Add two sentence frames.
6. Use the material in one short pair task.
7. Note what students found easier, harder, or still unclear.

What Students Told Us

The project used two learning-experience surveys at the Alessandro Volta Institute: a pre-project survey with respondents and a follow-up survey from classes that had used the platform.

Student-reported item	Before	Follow-up	Change
Words used in lessons are easy to understand	3.62	4.08	+0.46
Lessons are structured to support engagement and retention	2.95	3.60	+0.65

Open responses were mixed. Some students reported that lessons were more interesting or easier to understand, while others noticed little or no change. Students repeatedly valued simpler language, practical examples, interaction, group work, and clear teacher explanation.

Important limitation: these surveys measured students' perceptions of clarity, confidence, engagement, and understanding. They did not directly measure language proficiency or academic attainment.

Key Lessons from the Project

AI is most useful as a starting point, not a finished product. The strongest lessons followed a generate, review, refine, and teach cycle.

CLIL can improve access without lowering expectations when language barriers are identified and supported.

Language support can benefit advanced learners as well as students who need more support.

Teacher judgement remains central to accuracy, sequencing, timing, grouping, and assessment.

Small, focused changes can be more sustainable than complete lesson redesign.

Frequently Asked Questions

Do I need to be an AI expert?

No. A clear purpose, a reasonably specific prompt, and careful review are enough to begin.

Is the platform intended for teachers or students?

It is primarily a teacher planning platform. Teachers decide what students see and how it is used.

What information should I avoid uploading?

Do not upload student names, sensitive personal information, identifiable assessment records, or material you do not have permission to process.

How accurate is the CEFR assessment?

It is an approximate AI-generated planning aid, not a formal assessment. Read the text and judge it against the real learners.

What should I do if a generated link does not work?

Search for the resource manually, replace the link, and check all links before class.

Can the platform be used in non-language subjects?

Yes. The project focused on programming, databases, networks, and other technical content. Language was not the main subject, but it influenced students' access to the content.

What if students have several language levels?

Keep a shared content goal and vary text versions, sentence frames, planning support, or output demands.

Can I use the Chrome extension on a school device?

Possibly, but school-managed devices may block unpacked extensions. The Resources tab can be used manually instead.

How do I check whether an adapted text is still accurate?

Compare it with the source, check essential technical terms and qualifications, and verify any claim you are not certain about.

What is the simplest way to begin?

Adapt one text you already use, add six essential terms and two sentence frames, and try one short pair task.

Glossary

Term	Meaning
AI	Artificial intelligence: computer systems that generate, classify, predict, or transform information.
CEFR	Common European Framework of Reference for Languages, from A1 to C2.
CLIL	Content and Language Integrated Learning.
Content objective	What students should understand or be able to do in the subject.
Language objective	The language students need to understand, communicate, or complete the task.
Scaffold	Temporary support that helps a learner complete a task and can be reduced over time.
Prompt	An instruction or request entered into an AI system.
Text-to-speech	Synthetic audio generated from written text.
Hallucination	Plausible-looking but inaccurate or invented AI output.
Multilingual learner	A learner who uses or is learning more than one language.

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Publication Information

Official project title	Empowering Teachers with AI: A CLIL Integration Project
Project acronym	AI-CLIL-ET
Project reference	2024-1-IE01-KA210-VET-000252978
Edition	English edition, Version 1.0
Publication date	July 2026
Coordinating organisation	Teacher Academy Ireland Limited, Dublin, Ireland
Partner organisation	ISTITUTO TECNICO INDUSTRIALE STATALE ALESSANDRO VOLTA, Perugia, Italy
Platform	Open the AI-CLIL platform
Contact	patrickohare3@gmail.com

Recommended citation: Teacher Academy Ireland Limited and Istituto Tecnico Tecnologico Statale Alessandro Volta (2026). AI-CLIL Integration Handbook: A Practical Guide for Teachers. Erasmus+ project 2024-1-IE01-KA210-VET-000252978.

Screenshots reflect the platform version reviewed in July 2026. The interface may change as the platform is updated.

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Acknowledgements

This handbook was developed through close collaboration between the project partners and the teachers and students who tested the platform.

At Teacher Academy Ireland (Dublin)

Dr Robert Schwamborn, Director. Patrick O'Hare, project coordination and handbook development. Tomasz Laskowski, platform development. Gillian Cooke, CLIL methodology. Emma O'Hare, project support.

At the Alessandro Volta Institute (Perugia)

Fabiana Cruciani, Director. Laura Rosati and Lucia Vermigli, project coordination and classroom testing. Frida Valecchi, Francesco Casinini, and other Volta teachers, classroom testing and teacher feedback. Francesca Farinelli, project support and public presentation.

We also thank the students of classes 1 EQ, 3 AINF, 4 AINF, 4 CINF, 4 DINF, 5 AINF, 5 CINF and 5 DINF, whose feedback shaped both the platform and this handbook.

Funded by the European Union. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or Léargas. Neither the European Union nor Léargas can be held responsible for them.

Project Reference: 2024-1-IE01-KA210-VET-000252978



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