

∞ DebateRoom

AI-powered teaching debates for Moodle and EdTech

Not a chatbot. A learning format.

Presented by oca-i.net

DebateRoom · Infinite Backroom

Málaga, Spain

Powered by oca-i.net

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<https://oca-i.net>

Product: <https://debate.oca-i.net>

EdTech demo: <https://debate.oca-i.net/?view=edtech>

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Executive summary

DebateRoom turns any classroom topic — an article, a video, or a forum prompt — into a structured debate between two complementary AI agents. Teachers get a live argumentation model before opening the Moodle forum; students see how evidence, counterarguments, and respectful disagreement are built — then participate with clear assessment criteria. Built for flipped classrooms, digital literacy, and critical thinking: it fits the LMS ecosystem without replacing the teacher, but amplifying their ability to prepare high-quality dialectical activities in minutes.

Not a chatbot. A learning format.

The pedagogical challenge

In many online courses, the Moodle forum becomes a stream of short opinions without argumentative structure. Students do not always know how to cite sources, recognise nuance, or reply to peers with rigour and respect. Teachers spend hours writing static examples in PDF. Generic conversational assistants do not fix this either: one voice, one summary, no dialectical tension or observable debate model. What is missing is a specific, reproducible pedagogical format that plugs into the usual LMS workflow.

Our response

DebateRoom introduces a debate-native format: two specialised perspectives alternating turns on a concrete source. In EdTech mode, roles align with the classroom: a tutor agent (explanation, data, sources) and a sceptic agent (student doubts, counterexamples). The output is not text to copy-paste, but an experience the class can watch, listen to (radio mode), and use as reference before writing in the forum. The teacher keeps control of the prompt, rubric, and grading; AI supplies the interaction model.

Moodle workflow · Flipped classroom

Workflow integration: the LMS remains the hub for assessment and community; DebateRoom prepares the prior dialectical material.

1 · Design in Moodle

The teacher creates the forum activity with a guiding question, rubric (arguments, sources, respect), and assessment criteria aligned with the syllabus.

2 · Model debate in DebateRoom

Title, question, and teaching context are entered. The system generates a live debate adjustable in length and language — in class or as pre-reading.

3 · Publish in the LMS

Material is shared in Moodle as a «reference debate»: link, EPUB reading, or audio playback depending on the cohort profile.

4 · Student participation

Learners post in the forum: identify the strongest argument on each side, defend their view with at least one source, and reply to peers using the same modelled style.

Use cases

History & Social Sciences

Example: «Was the Industrial Revolution purely positive?»

Contrast causes, social costs, and critical source reading before the forum.

Citizenship & Sustainability

Example: «Individual action or collective responsibility on climate?»

Ethical dilemmas with data (IPCC) and valid counterarguments.

Digital Education / GDPR

Example: «Privacy vs. security in the connected classroom?»

Regulatory nuance without reducing the issue to yes/no.

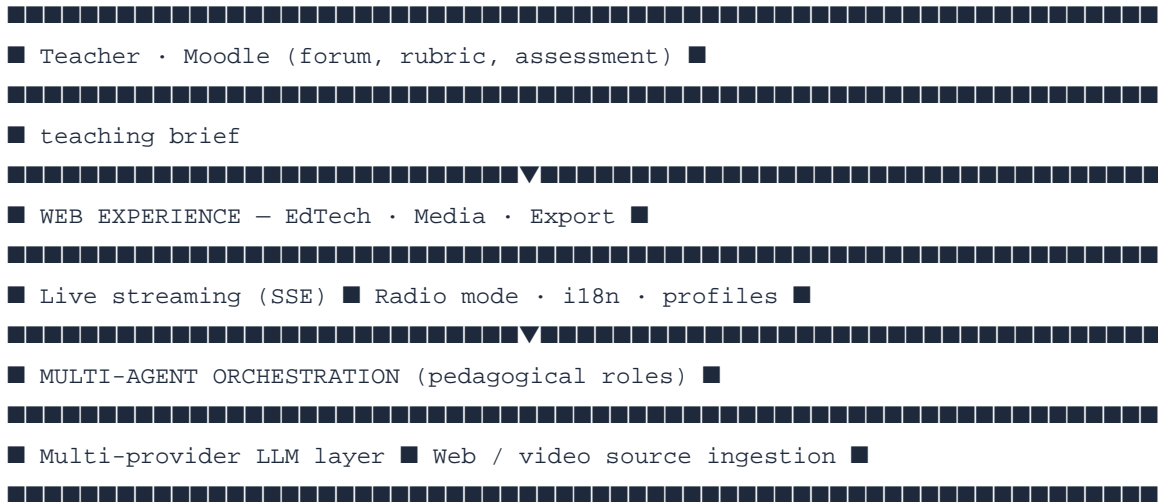
Language lab

Example: «Does AI feedback improve writing?»

Same topic in Spanish, English, or Norwegian; active listening and cross-lingual comparison.

Architecture (overview)

Decoupled layered architecture. Pedagogical and orchestration logic stays on the server; the UI only consumes events and state.



Layer	Description
Teacher experience	Unified web UI with dedicated views: media debate (news/video), EdTech mode (teacher brief), and product dossier. Responsive design, visual themes, and internationalisation.
Real-time layer	Turn streaming via server-client events; teachers and students see the debate progress without page reloads, with status indicators and pause control.
Multi-agent orchestration	Debate engine alternating speakers, managing accumulated context and duration profiles (short, standard, extended). Pedagogical logic is encapsulated in this layer.
LLM abstraction	Connectors to market LLM providers with flexible per-environment configuration. Mix models by cost, latency, or language without redesigning the experience.
Source ingestion	Structured extraction from web articles and video metadata to anchor debate in verifiable content, not free-form hallucination.
Identity & monetisation	Federated auth, subscription, and premium export (EPUB and publishing bundle) with session-based access control.
LMS bridge	Workflow-first integration with Moodle and compatible LMS: teachers stay in their habitual environment; DebateRoom generates pre-forum teaching content.

Technology stack

Standard market technologies. No lock-in to a single AI provider or closed frontend framework.

Layer	Description
Backend	Python · async REST API · production-grade app server
Frontend	Lightweight SPA · modular JavaScript · modern CSS without heavy frameworks
Real-time	Server-Sent Events for unidirectional turn streaming
AI	Multi-provider layer (OpenAI-compatible / Anthropic / edge cloud APIs)
Content	HTML extraction and multimedia source enrichment
Audio	Radio mode with in-browser speech synthesis (Web Speech API)
Export	EPUB generation, cover art, and publishing metadata
Auth	OAuth 2.0 (Google) · secure sessions · signup and subscription
i18n	Spanish · English · Norwegian (+ extensible debate languages)
Deployment	Linux · reverse proxy · HTTPS · systemd · EU cloud hosting

Product capabilities

- EdTech model debate from teacher brief (course, guiding question, context).
- Duration profiles: 3, 5, or 8 rounds to fit class time.
- Live debate language switch (ES / EN / NO).
- Radio mode: debate as a mini-podcast for flipped learning.
- URL debate (news or YouTube) for media literacy and current affairs.
- EPUB export + publishing bundle (cover and metadata sheet).
- Teaching presets and free-form form for any subject.
- Multi-view UI: general product, EdTech, and positioning dossier.

Why DebateRoom

Format, not model

Value lies in dialectical structure and pedagogical roles — not exposing a generic LLM in a chat box.

Built for Moodle

Four-step flow aligned with forums, rubrics, and flipped classroom — no LMS migration required.

Observable & assessable

Teachers can grade argumentation because students already saw an explicit model of how to do it.

Technology sovereignty

Decoupled architecture: swappable AI provider, self-hosting possible, institutional data control.

Public roadmap

Available — EdTech debate · streaming · profiles · i18n · EPUB/KDP export · radio mode

In progress — Institutional deployment · extended SSO · teacher UX refinement

Coming soon — Native Moodle activity (LTI) · assisted grading · YouTube comments debate

Vision — Subject template marketplace · learning analytics · premium TTS

Closing

DebateRoom positions debate as the product format: an EdTech piece ready for pilots with schools, publishers, and Moodle platforms seeking AI with clear pedagogical purpose — not another classroom chat. For institutional pilots, live demos, or extended technical dossier, contact oca-i.net.

This dossier describes capabilities and high-level architecture only. It does not include internal prompts, orchestration algorithms, agent configurations, or pending proprietary integrations. Intellectual property of the pedagogical format and debate engine remains with DebateRoom / oca-i.

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