



Cosas chachis que pasan cuando diversos proyectos de software libre se juntan:

## Integración de H5P, BBB y Matrix con Moodle



**Sara Arjona Téllez**

Desarrolladora e integradora | Moodle HQ

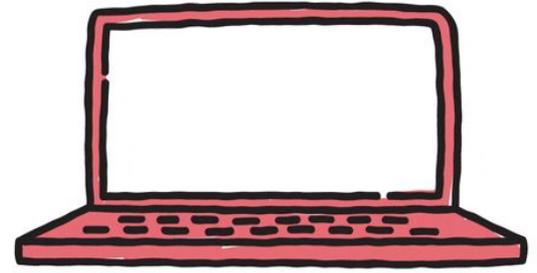
@sara\_arjona

#esLibre2023

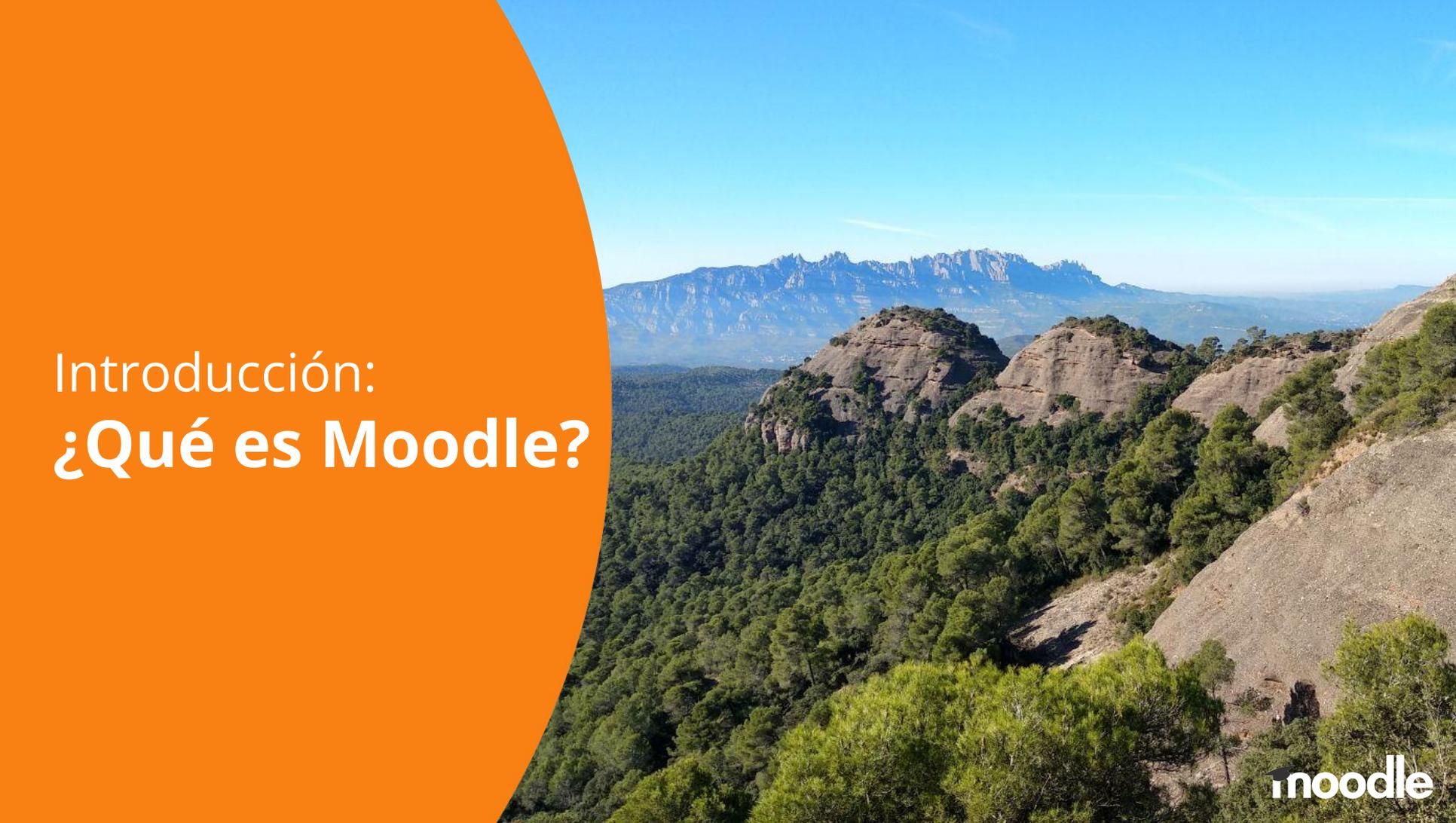
# Contenido

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- ¿Qué es Moodle?
  - Integración con H5P
  - Integración con BigBlueButton
  - Integración con Matrix



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# Introducción: ¿Qué es Moodle?

# ¿Quién es docente?

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# ¿Habéis usado Moodle alguna vez?

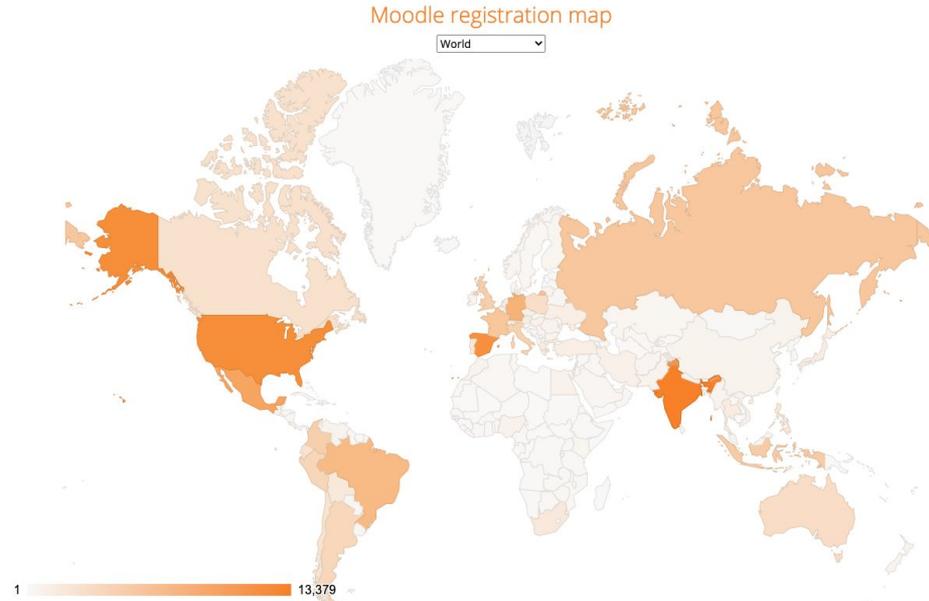
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# Moodle LMS

- Proyecto de software libre
- **Entorno virtual de aprendizaje:**
  - Modular Object-Oriented Dynamic Learning Environment
- Sitios registrados
  - 165K+ sitios registrados
  - 44M+ cursos y 360M+ usuarios
- Traducido a más de **140 idiomas**

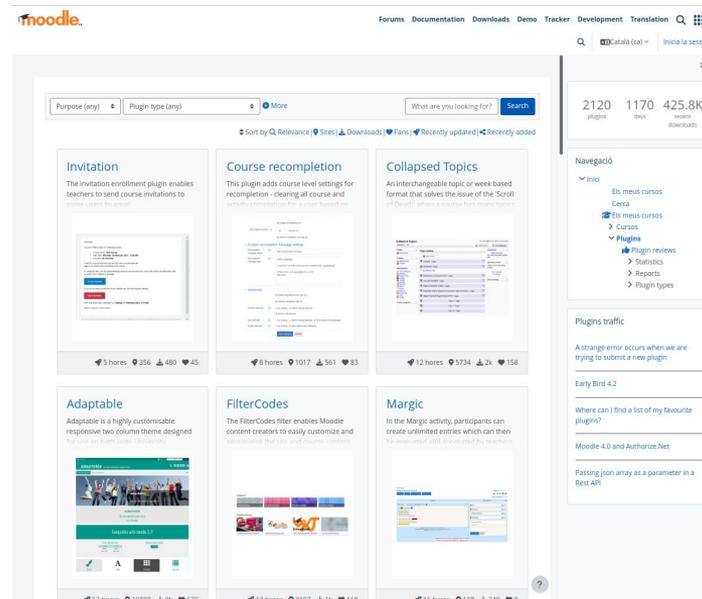


**España #1:**  
12K+ de sitios registrados

<https://moodle.org/>

# Moodle Plugins

- Directorio con más de 2.000 plugins desarrollados por la comunidad
- Tipologías de plugins:
  - Temas
  - Formatos de curso
  - Actividades
  - Y muchas más...
- Disponible en abierto, tanto para contribuir como para descargar



<https://moodle.org/plugins>

# Moodle App

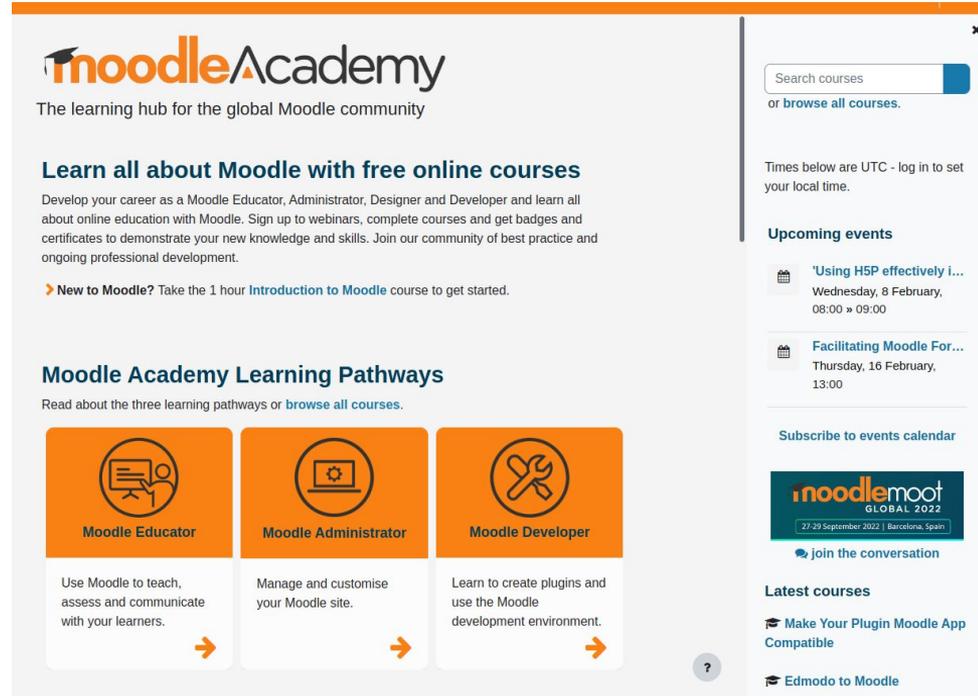
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- Gratuita con limitaciones
- Algunas ventajas:
  - Consultar contenido offline
  - Notificaciones push
- Disponible para Android y iOS
- Posibilidad de crear una App personalizada

<https://moodle.com/app/>

# Moodle Academy

- Contenido gratuito para aprender sobre Moodle
- Cursos básicos:
  - Docentes
  - Administradores
  - Desarrolladores
- Webinar:
  - 16 de mayo de 2023:  
Get Ready for MoodleMoot Global 2023



The screenshot shows the Moodle Academy website. At the top, the logo reads "moodleAcademy" with the tagline "The learning hub for the global Moodle community". Below this, a section titled "Learn all about Moodle with free online courses" describes the opportunity to develop a career as a Moodle Educator, Administrator, Designer, or Developer through various courses and webinars. A call to action for new users points to a 1-hour "Introduction to Moodle" course. The "Moodle Academy Learning Pathways" section features three orange boxes: "Moodle Educator" (teaching and communication), "Moodle Administrator" (site management), and "Moodle Developer" (plugin creation). The right sidebar includes a search bar, a list of upcoming events like "Using H5P effectively" and "Facilitating Moodle Forums", a subscription link for the events calendar, a banner for "moodle moot GLOBAL 2022" (September 27-29, Barcelona), and a list of latest courses such as "Make Your Plugin Moodle App Compatible" and "Edmodo to Moodle".

<https://moodle.academy>

# ¿Cómo colaborar?

- Notificación de errores y mejoras:  
<https://tracker.moodle.org/>
- Traducción: <https://lang.moodle.org/>
- Documentación: <https://docs.moodle.org/>
- Validación de versiones nuevas (QA):  
<https://moodledev.io/general/development/process/testing/qa>
- Foros de soporte:  
<https://moodle.org/course/index.php?categoryid=3>
- Moodle user association:  
<https://moodleassociation.org/>



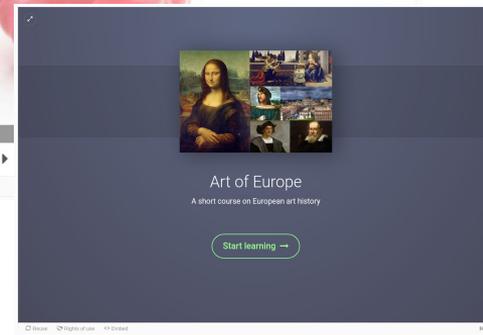
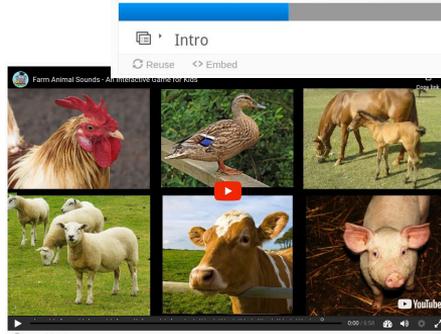
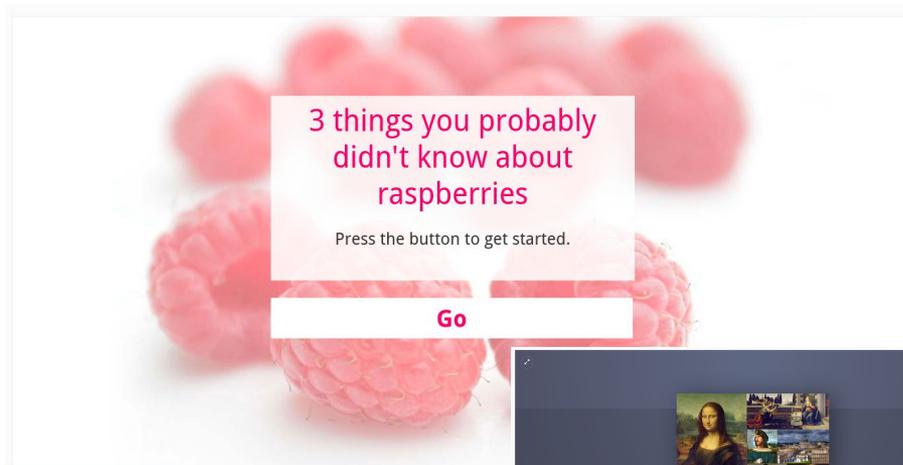
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# H5P

Crear contenido interactivo  
nunca fue tan fácil

# ¿Qué es H5P?

- Herramienta de software libre para **crear contenido interactivo**
  - Fácil de usar
  - Atractiva
- + de 40 tipos de contenidos



<https://h5p.org/>

# H5P: Tipos de contenidos

- Para añadir interacción rápida y fácilmente:

- Accordion
- Image hotspots



- Para comprobar si se ha entendido un tema:

- Question set
- Drag text
- Interactive video
- Dialog cards, flashcards
- Drag and drop
- Essay
- Find multiple hotspots

- Para mejorar la experiencia interactiva:

- Course presentation
- Column
- Interactive book
- Branching scenario

# H5P: Ejemplos



## INTERACTIVE VIDEO

Step 1 Upload/embed video Step 2 Add interactions Step 3 Summary task

Mens haircut Clipper over comb Fundamentals full tutorial

What type of line is being created?

- Curved
- Base line

Check

3:50 / 28:25

Previous Step Upload/embed video Next Step Summary task

Step 1 Upload/embed video Step 2 Add interactions Step 3 Summary task

Finger painting

The child has tried to assert his autonomy by attempting to tip the paint out himself and although he was stopped from doing this, he has shown signs of his emerging autonomy and initiative.

These cognitive and emotional dispositions are reflective of Outcome 1: Children have a strong sense of identity, Strand b) Children develop their emerging autonomy, inter-dependence, resilience and sense of agency. He also used his fine motor physical skills to manipulate the paint pot and brush.

0:24 / 3:40

Previous Step Upload/embed video Next Step Summary task

## COURSE PRESENTATION

Track your alignment

Your parcel

LEVEL 3

Real or scam? (click on image to enlarge)

- Real
- Scam

Submit

Level 3 1 / 16

Challenge 1 3 / 16

SOUTH WEST TAFE

# H5P: Ejemplos

## SCENARIO



Conflicts of Interest and Gifts, Benefits, Hospitality

Conflicts of Interest and Gifts, Benefits, Hospitality

Start the game →

## SCENARIO

Page title	Page type	Jumps	Actions
Introduction	Content	Next page	I [ ] [ ] [ ] [ ] Add a new page...
Question 1	Multichoice	Q1: Incorrect Question 2	I [ ] [ ] [ ] [ ] Add a new page...
Q1: Incorrect	Content	Question 1	I [ ] [ ] [ ] [ ] Add a new page...
Question 2	Multichoice	Q2: Incorrect Question 3 Q2: Incorrect	I [ ] [ ] [ ] [ ] Add a new page...
Q2: Incorrect	Content	Question 2	I [ ] [ ] [ ] [ ] Add a new page...
Question 3	Multichoice	Q3: Incorrect Q3: Incorrect Question 4	I [ ] [ ] [ ] [ ] Add a new page...
Q3: Incorrect	Content	Question 3	I [ ] [ ] [ ] [ ] Add a new page...
Question 4	Multichoice	Q4: Incorrect Question 5 Q4: Incorrect Q4: Incorrect	I [ ] [ ] [ ] [ ] Add a new page...
Q4: Incorrect	Content	Question 4	I [ ] [ ] [ ] [ ] Add a new page...



# H5P: Ejemplos

## FLASHCARDS

Skeletal Flash Cards  
3 / 13

What is the name of this leg bone?

These bones are called?

Name both bones (put "and" between their names).

Is it a soft line or hard line?

Card 1 of 13

SOUTH WEST TAFE

## FIND THE WORDS

Find the terms in the grid.

N	L	L	I	L	P	K	P	T	M	E	N
J	I	U	C	A	R	E	R	O	B	K	E
F	O	R	E	S	E	E	A	B	L	E	G
P	W	W	J	X	I	P	C	P	Z	L	L
N	A	N	D	U	T	Y	T	U	E	B	I
K	G	X	Q	X	U	B	I	C	R	A	G
M	A	P	Y	O	M	R	C	E	T	N	E
Y	H	A	A	P	G	E	A	M	C	O	N
K	S	G	H	H	B	J	L	L	V	S	C
W	A	V	C	A	F	E	I	Y	S	A	E
K	V	H	P	R	A	C	T	I	C	E	M
R	V	C	F	M	O	J	Y	Q	D	R	Q

Find the words

- Duty
- care
- Foreseeable
- harm
- Reasonable
- practicality
- Negligence
- practice

Time Spent : 0:00

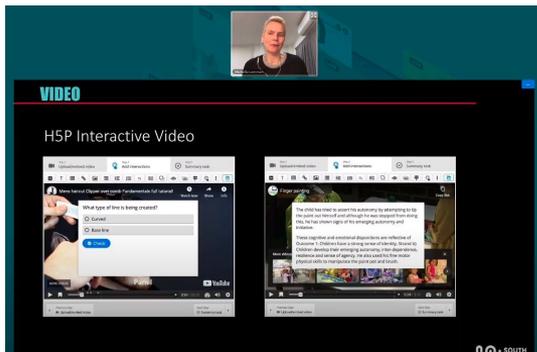
0 of 8 found

Check

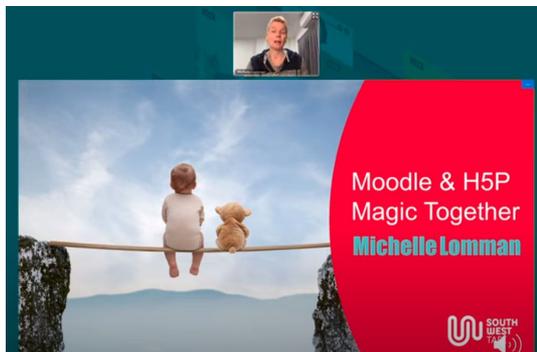
# Michelle Lomman



Rocking Moodle with H5P  
<https://youtu.be/BUfdUI80LgI?t=3212>



Making even better Moodle courses  
[https://youtu.be/e5GVxTExo\\_A](https://youtu.be/e5GVxTExo_A)



Moodle & H5P, magic together  
<https://youtu.be/hxYgod9CIYg>

		Memorisation	Judgment	Consequences	Strategy	Simulation
Game	fast paced quick recall and response testing with correct / incorrect responses	question and answers with correct / incorrect responses	cause-and-effect based on decisions (good, bad, best)	puzzles, challenges, solution driven experience	simulated, immersive environments, free roaming, and collaborative	
Skills	<ul style="list-style-type: none"> <li>Describe</li> <li>List</li> <li>Find</li> <li>Match</li> <li>Identify</li> <li>Recognise</li> </ul>	<ul style="list-style-type: none"> <li>Estimate</li> <li>Interpret</li> <li>Explain</li> <li>Predict</li> <li>Infer</li> <li>Relate</li> </ul>	<ul style="list-style-type: none"> <li>Administer</li> <li>Produce</li> <li>Calculate</li> <li>Prepare</li> <li>Change</li> <li>Solve</li> </ul>	<ul style="list-style-type: none"> <li>Appraise</li> <li>Compare</li> <li>Categorize</li> <li>Conclude</li> <li>Classify</li> <li>Prioritise</li> </ul>	<ul style="list-style-type: none"> <li>Anticipate</li> <li>Design</li> <li>Assemble</li> <li>Invent</li> <li>Construct</li> <li>Recognise</li> </ul>	

Learning games made easy  
[https://youtu.be/0V97ohHx\\_98](https://youtu.be/0V97ohHx_98)

# ¿Habéis creado contenido H5P?

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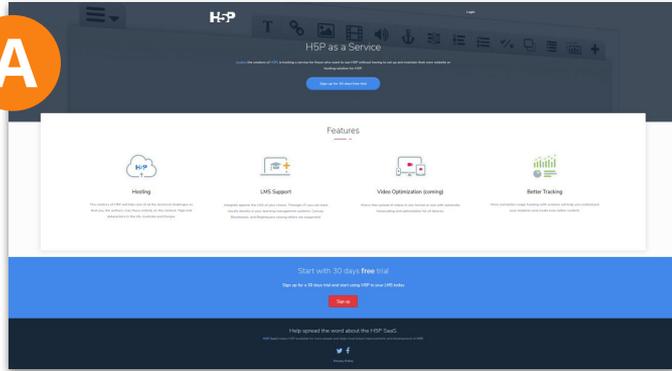


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# Crear contenido H5P

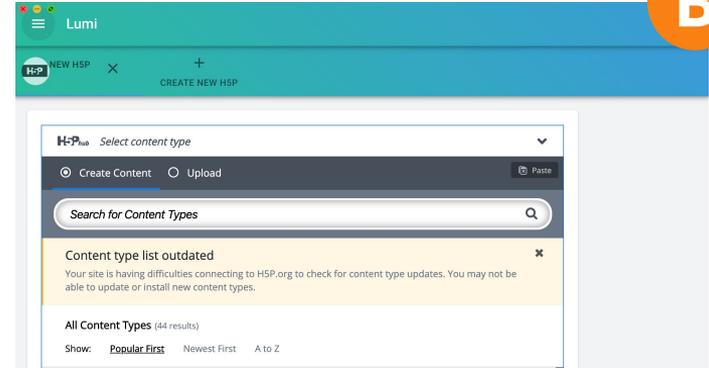
h5p.com

A



lumi.education

B



C

Content bank

Search  Add Upload

Content name	Places linked	Last modified	Size	Type	Author
Eating	1	7/09/22, 09:32	2.0 MB	Archive (H5P)	Michelle Lorman
Exploring Barcelona	0	10/09/22, 10:56	6.7 MB	Archive (H5P)	Michelle Lorman
Fun Fact Challenge	1	11/09/22, 10:34	1.1 MB	Archive (H5P)	Michelle Lorman

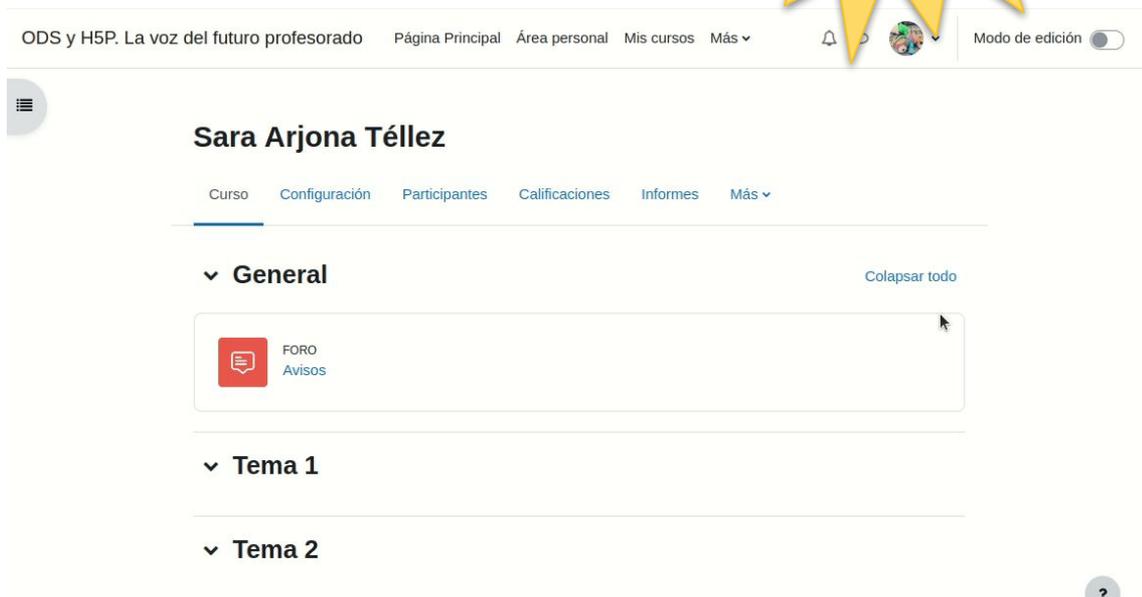
¡Desde 3.9!

Banco de contenidos

# Actividad H5P en Moodle

¡Desde  
3.9!

- Guarda los intentos de los estudiantes
- Se registra en el libro de calificaciones del curso



ODS y H5P. La voz del futuro profesorado [Página Principal](#) [Área personal](#) [Mis cursos](#) [Más](#)   [Modo de edición](#)

**Sara Arjona Téllez**

[Curso](#) [Configuración](#) [Participantes](#) [Calificaciones](#) [Informes](#) [Más](#)

▼ **General** [Colapsar todo](#)

 **FORO Avisos**

▼ **Tema 1**

▼ **Tema 2**

# H5P en cualquier lugar del curso



• When a new account is created in Moodle, the new account holder is called an “authenticated user” and they don’t have a specific role on the site. It is your job as admin to make them a learner (or student) or a teacher in the courses where they will learn or teach.

• To add users to a course, access the course, click the Participants link on the left. Then click Enrol users. As an admin you can choose to enrol them as students, teachers or other roles.

• When a regular course teacher clicks this button, they cannot enrol other teachers, unless you allow them to do this.

### Documentation

- [Add teachers and students](#)

Table of contents

1. Focus for this tutorial
2. Enable course sign up
3. Add teachers and learners
4. Add course groups
5. Guest access to courses
6. Set up payment

### Add users to courses (Enrolment)

◀ Previous: 2. Enable course sign up      Next: 4. Add course groups ▶

#### 3. Add teachers and learners

Download the transcript: [How can I add teachers and learners to my courses?](#)

- When a new account is created in Moodle, the new account holder is called an “authenticated user” and they don’t have a specific role on the site. It is your job as admin to make them a learner (or student) or a teacher in the courses where they will learn or teach.
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- When a regular course teacher clicks this button, they cannot enrol other teachers, unless you allow them to do this.

#### Documentation

- [Add teachers and students](#)

#### Quick check: Drag the words into the correct boxes

When users log in to Moodle they are  users. It is the job of the  to give them roles in courses. A course teacher can enrol a  by default. An Administrator can enrol a  by  .



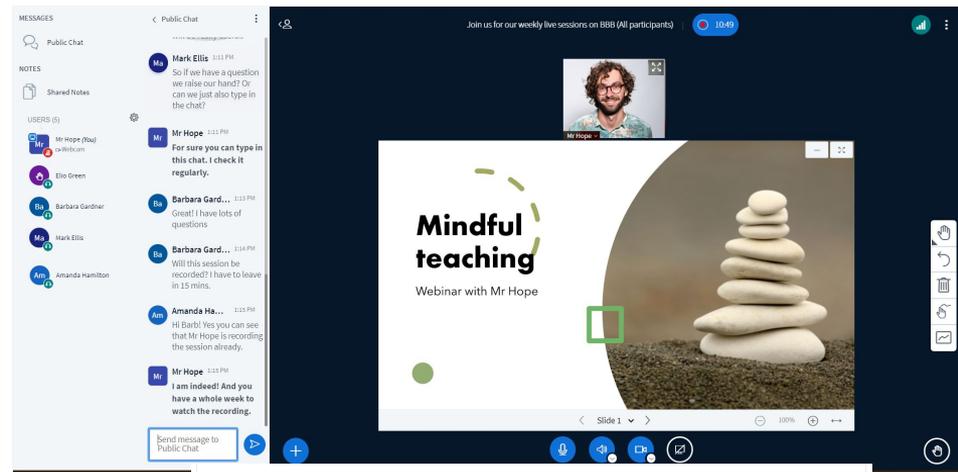
# BBB

[BigBlueButton]

Más que un sistema de  
vídeo conferencia:  
construyendo la próxima  
generación de aulas  
virtuales

# ¿Qué es BigBlueButton (BBB)?

- Proyecto de software libre de **conferencia web** construido por el profesorado, para el profesorado
- Basado en GNU/Linux
- Características:
  - Opciones avanzadas de pizarra
  - Chats público y privado
  - Uso compartido de escritorio
  - Presentación de documentos PDF
- Integrado con diversas herramientas, como Drupal, Wordpress o Moodle



Join session End session

Recordings

Playback	Name	Description	Preview	Date	Duration	Toolbar
Capture	Emmura			Mon, 24 Jan 2022, 10:31 PM EST	17	

Import recording links

<https://bigbluebutton.org/>

# Integración con Moodle



- Desactivado por defecto por protección de datos personales
- Restricciones del alojamiento gratuito:
  - Duración máxima: 60 minutos
  - Usuarios concurrentes: 25
  - Grabaciones expiran pasados 7 días y no son descargables
  - Cámaras web estudiantes sólo visibles para el moderador
- Grabaciones accesibles desde el aula

Join session End session

Recordings

Playback	Name	Description	Preview	Date	Duration	Toolbar
Capture	Emmura			Mon, 24 Jan 2022, 10:31 PM EST	17	🔒 👁 🗑

Import recording links

▼ **Guest access**

- Allow guest access in the meeting
- User must be approved by moderators

Meeting link  [Copy link](#)

Meeting password  [Copy password](#)

# ¿Tenéis servicio propio de BBB?

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Font: <https://gph.is/2zzdMCM>

# Más información

- Curso en Moodle Academy: [Deliver Effective Virtual Classrooms Using BigBlueButton](#)
- Tutoriales: <https://bigbluebutton.org/teachers/tutorials/>



## Deliver Effective Virtual Classrooms Using BigBlueButton

### ▼ About this course

In this course you will learn, how to create a virtual classroom within Moodle 4.0, the basic theories of learning and how they apply to a virtual classroom, how to structure segments in a virtual classroom to maximise active learning for your students, how to deliver an effective virtual class across four key foundations: management, relationship, engagement, and assessment and how BigBlueButton supports delivery in each of the above foundations.

This course relates to the following competence(s):

#### 1.1 Organisational communication

##### 3.1 Teaching

##### 3.2 Guidance

##### 3.3 Collaborative learning

#### 6.2 Digital communication and collaboration

Estimated learning time: 3 hours

Level: Intermediate

Programs:

## Student Overview

This is where we introduce students to BigBlueButton, we'll show them how the tools work and how to take advantage of the BigBlueButton learning environment to meet and exceed their educational goals.

## Instructor Overview

This quick introduction will show you how BigBlueButton improves online learning by letting you easily create a more cohesive online classroom experience for students.



# [matrix]

Porque la comunicación en  
la formación es importante

# ¿Qué es Matrix?

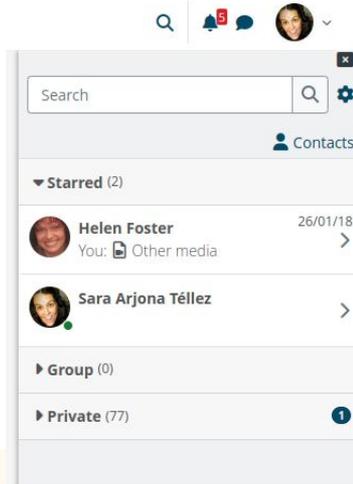
- **Plataforma de comunicación** independiente y de software libre
- Matrix también es un **estándar abierto** para definir un protocolo de comunicación en tiempo real segura y descentralizada
- **Clientes:**
  - Element
  - FluffyChat
  - Hydrogen
  - ...

<https://matrix.org/>

### An Open Standard

- Simple pragmatic **RESTful HTTP/JSON APIs** by default
- Open specification** of the Matrix standard
- Fully decentralised conversations with no single points of control or failure
- End-to-end encryption via Olm and Megolm
- WebRTC VoIP/Video calling using Matrix signalling
- Real-time synchronised history and state across all clients
- Integrates with existing 3rd party IDs to authenticate and discover users
- Maintained by the non-profit **Matrix.org Foundation**
- Group conversations, read receipts, typing notifications, presence...

# ¿Comunicación y Moodle?



- Moodle no es una herramienta de comunicación. Pero la formación necesita de comunicación 🗨️
  - We all love messaging! ❤️
- En Moodle 3.6 se rediseñó el sistema de mensajería... Pero no fue suficiente 😊
- Conclusiones del [estudio realizado por el equipo de PX \(Product eXperience\)](#) 🧐

## Summary of findings

- 1 Messaging between teachers and students is not being used for learning, but for the administration and communication that supports learning.
- 2 Student-to-student messaging is being used for learning purposes, but Moodle Messaging isn't meeting their needs.
- 3 Too many communication channels and dispersed delivery methods leads to confusion, uncertainty and frustration.
- 4 Data privacy is a key consideration that impacts Moodle usage and communication.
- 5 There was no overwhelming request or need for Moodle to integrate with a particular tool.
- 6 Messaging misconduct wasn't a big concern or consideration for Teachers, Admins or Students



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# Nuevo proyecto para la 4.2 4.3

> Course format

> Appearance

▼ Communication

Communication service

Room name

Room topic

This course will introduce you to the basics of Alpine Mountaineering, while at the same time highlighting some of the great features of Moodle.

FORUM Course announcements

A place for announcements. You'll be automatically subscribed to this.

Have your Say

FORUM This week's discussion topic.

Each week we'll be having a discussion on a different mountaineering issue. Feel free to add your thoughts.

Chat to course participants.

Send messages and images, make video calls, and chat to other course participants and teachers in real time.

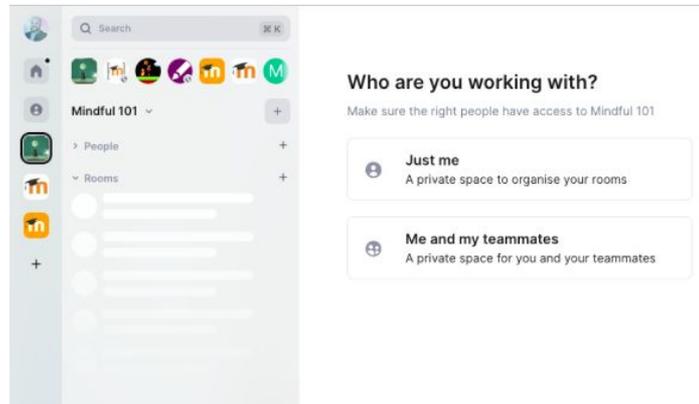
Go!

- Prover una API para facilitar la integración de herramientas de comunicación
  - Matrix es la prueba de concepto
- Integrar el cliente web Element con Moodle
- Publicar la nueva herramienta de comunicación como experimental
  - En un futuro esperamos que se integren más proveedores

<https://tracker.moodle.org/browse/IDEA-2>

# Restricciones actuales

- No funciona con grupos, solo a nivel de curso
  - Aunque la API está preparada para poder funcionar con grupos en el futuro, incluso a nivel de actividad
- Hay que estar matriculado en el curso
  - Otros roles a nivel de categoría de curso como gestores no accederán automáticamente a la sala de Matrix
- En la primera fase solo funcionará con el cliente web de Matrix Element



<https://tracker.moodle.org/browse/MDL-77576>

Estooooo...  
**¿Un resumen, porfi?**

# Contenido

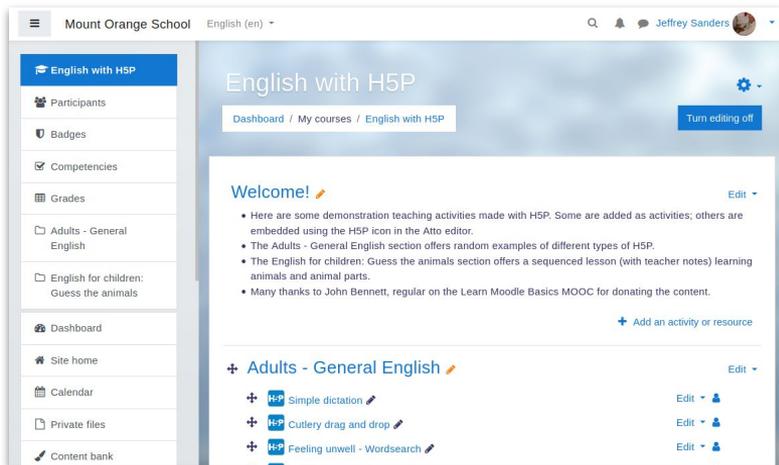
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- ¿Qué es Moodle?
  - Plugins, App, Academy...
- Algunas integraciones:
  - **H5P**  
Herramienta para crear contenido interactivo
  - **BBB**  
Sistema de conferencia web diseñado en torno a las necesidades de profesores, estudiantes y escuelas
  - **Matrix**  
Estándar de código abierto que ofrece sistemas de comunicación cifrados, descentralizados y en tiempo real



Font: <http://gph.is/1PHyry>

# Explora Moodle...



The screenshot shows a Moodle course interface. At the top, it says 'Mount Orange School' and 'English (en)'. The course title is 'English with H5P'. The left sidebar contains a menu with items like 'Participants', 'Badges', 'Competencies', 'Grades', 'Adults - General English', 'English for children: Guess the animals', 'Dashboard', 'Site home', 'Calendar', 'Private files', and 'Content bank'. The main content area has a 'Welcome!' message and a list of activities: 'Simple dictation', 'Cutlery drag and drop', and 'Feeling unwell - Wordsearch'. There are 'Edit' and 'Turn editing off' buttons.

Sitio demo de pruebas:  
[school.moodledemo.net](http://school.moodledemo.net)



The banner features the Moodle logo and the text 'MoodleCloud'. Below the logo, it says 'Create and sell your courses online, from your own platform'. Further down, it reads 'Start teaching online, training your staff or selling courses right away with your own ready-made platform hosted in the cloud.' At the bottom right, there is a 'Get started' button with a right-pointing arrow.

[moodle.com/moodlecloud](http://moodle.com/moodlecloud)



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#esLibre2023

**muchas  
gracias**



