

EdTech For Teacher By Teachers

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Hi, I'm Fred

I wear two hats:

I'm the Product Manager for
BigBlueButton

I'm the CEO of Blindside Networks



Overview

Our experiences during the Pandemic

Our vision for virtual classrooms

How BigBlueButton as an open source project is pursuing that vision

What is BigBlueButton?

An open source web conferencing system for online learning

A commercial virtual classroom system

A platform on which other developers/companies can build upon

An active ecosystem of teachers, developers, administrators, and commercial companies

User List / Chat Toggle

Session Title

Start/Stop Record

Settings Menu

The screenshot shows the BigBlueButton interface. On the left is a sidebar with sections for MESSAGES (Public Chat), NOTES (Shared Notes), and USERS (1 user: Test (You)). The main area displays a video feed of a man and a slide titled 'Welcome To BigBlueButton'. The slide content includes: 'Welcome To BigBlueButton', 'BigBlueButton is an open source web conferencing system designed for online learning', and a grid of features: CHAT (Send public and private messages), WEBCAMS (Hold visual meetings), AUDIO (Communicate using high quality audio), EMOJIS (Express yourself), BREAKOUT ROOMS (Group users into breakout rooms for team collaboration), POLLING (Poll your users anytime), SCREEN SHARING (Share your screen), and MULTI-USER WHITEBOARD (Draw together). At the bottom of the slide, it says 'For more information visit bigbluebutton.org'. The bottom of the interface has a toolbar with icons for a plus sign, audio, webcam, screen sharing, and a hand icon. The top of the interface shows 'Demo Meeting' and a 'Start recording' button. A settings menu is visible on the right side of the slide.

Whiteboard

Presentation actions

Share Audio, Webcam & Screen

Raise hand

Focus on engagement

- Raise Hand
- Public/Private Chat
- Emoji
- Multi-user whiteboard
- Polling
- Shared Notes
- Breakout rooms

Instructor Only

Engage with Instructor,
content, and each other

Types of collaboration

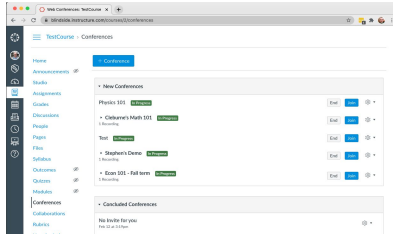
Collaboration

1. Virtual Office Hours
2. Flipped Classroom
3. Group Collaboration
4. Full Online Classes

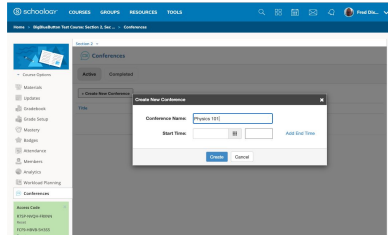
Context

1. K12
2. Higher Ed
3. Corporate Education

Embedded into the world's top LMS systems



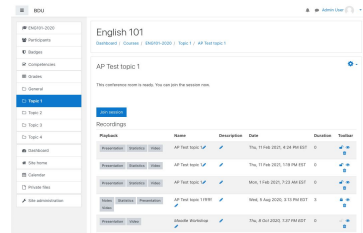
Canvas Conferences
Instructure



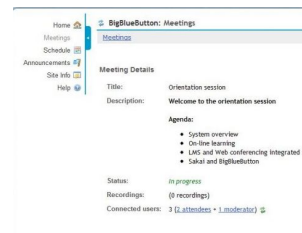
Schoology Conferences
Schoology



Virtual Classroom
D2L



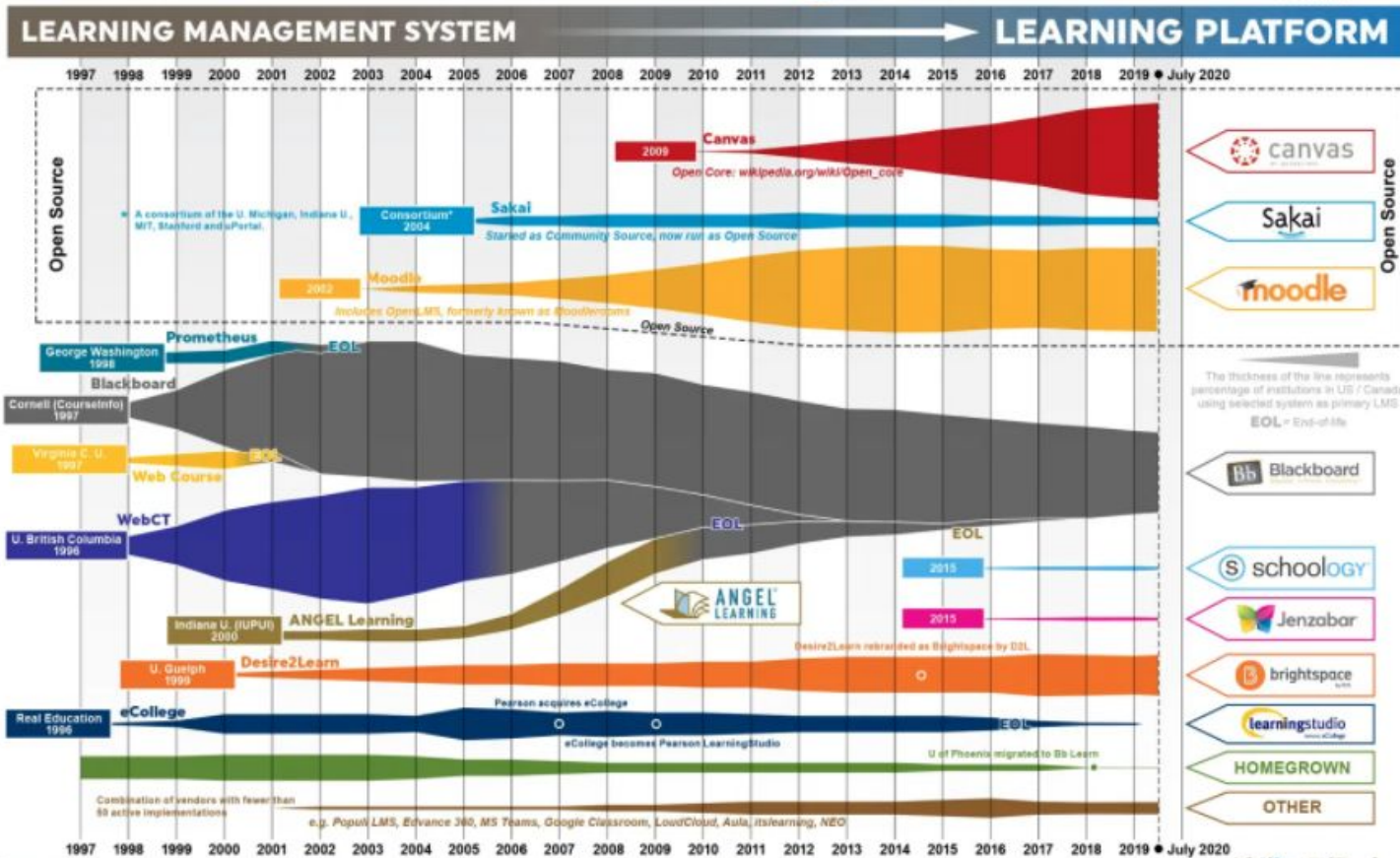
BigBlueButtonBN
Moodle



Meeting Tool
Sakai

LMS Market Share For US & Canadian Higher Ed Institutions

MID-YEAR 2020 EDITION



All data from LISTedTECH LMS database under agreement with MindWires, LLC

Philon EdTech

Public Chat

NOTES

Shared Notes

USERS (28)

Hans Kwast, ... (You)

Aditi Singh

Alija Rabbani

Allan Alvarado

Aminu M. Bala

Amna Abdeen Mo...

Anna Kövér

Cesar Pasaran Sa...

Doris Kraljic

Ee Shen Ong

Goodluck Nakai...

Hassan Jumanne...

Jethro Okon

Jia Yu Liu

Jingsi Zhang

Public Chat

Welcome at the lecture on Catchment Delineation by Hans van der Kwast

This session may be recorded.

This server is running [BigBlueButton](#).

Hans Kwast, van der 8:28 AM

Good morning!

Vajira Damayanthi Mala Senadhipat... 8:28 AM

Good Morning!

Anna Kövér 8:45 AM

good morning

Amna Abdeen Mohamedali B... (offline) 8:46 AM

I can not hear you

Anna Kövér 8:46 AM

i can

Aditi Singh 8:46 AM

Refresh the page

Maria J. Rivas Arrieta 8:46 AM

I can

Anna Kövér 8:51 AM

yes

Maria J. Rivas Arrieta 8:51 AM

yes

Aminu M. Bala 8:51 AM

Yes

Sarah Moreno Sayavedra 8:51 AM

yes

Renju Babu 8:51 AM

yes

Jia Yu Liu 8:51 AM

yes

Allan Alvarado 8:58 AM

I have a question.

Send message to Public Chat



Lecture catchment delineation

Start recording

Use of DEMs: Example French Alpes



Sala de Prueba - Ekipo Campus | 25:53

Monica Gago García | Maite Legarra Eizagirre | José Luis Abaunz | Nekane Maiztegi Ugarte

Chat público

NOTAS

Notas compartidas

USUARIOS (8)

- Es Estibaliz Hernan... (Tu)
- Ar Aritz Ubarrecheda B...
- Mo Monica Gago García
- Ne Nekane Maiztegi Uga...
- He Hervé Grellier Bidalun
- Jo José Luis Abaunz
- Lo Lore Iñurritegi Biain
- Ma Maite Legarra Eizagir...

Estibaliz Hernandez Eleno

Aritz Ubarrecheda Belandía

Monica Gago García

Nekane Maiztegi Ugarte

Hervé Grellier Bidalun

José Luis Abaunz

Lore Iñurritegi Blain

Maite Legarra Eizagirre

+ [Microphone] [Phone] [Video] [Screen Share] [Fullscreen]

Escribe aquí para buscar

Windows Taskbar: [Task View] [File Explorer] [Firefox] [Teams] [Word] [Chrome] [PDF Reader] [System Tray: Help, Network, Volume, Battery, Security, Date/Time: 13:01 06/04/2020]

Chloé Diskin (You)

Jen Hay

Andy Gibson

Dineke

Donald Derrick

Jacq

James.B

Jeanette

Ksenia

Lynn

Marie

Simon

Wakayo Mattingley



Canberra Corpus Collective (CCC)

Te Kāhui Roro Reo · New Zealand Institute of Language Brain & Behaviour



Chloé Diskin, James Grama, Ksenia Gnevsheva, Jen Hay, James Brand, Katie Drager,



Paul Foulkes, Elena Sheard, Catherine Travis, Gerry Docherty, Simón González & Deborah Loakes



UNIVERSITÄT DUISBURG ESSEN

Offen im Denken



Australian National University



UNIVERSITY of York



ARC CENTRE OF EXCELLENCE FOR THE DYNAMICS OF LANGUAGE



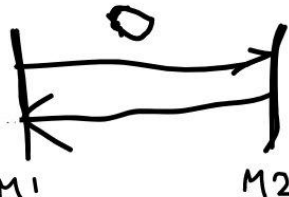
$V(x) = V(x+L)$ Bloch

alle states in $w \pm dw$

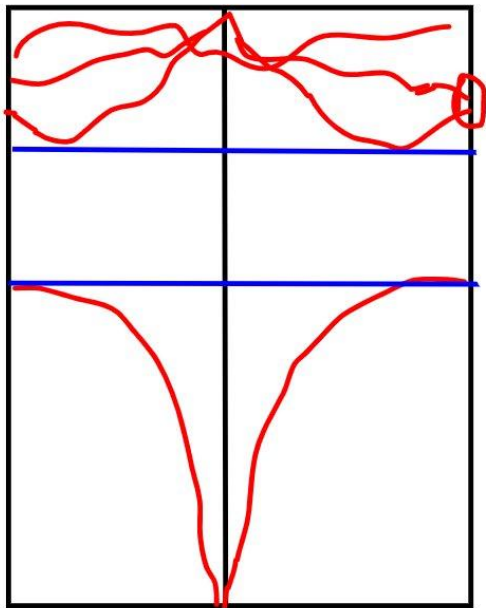
$\int_{1 \rightarrow 2}$



purcell m1



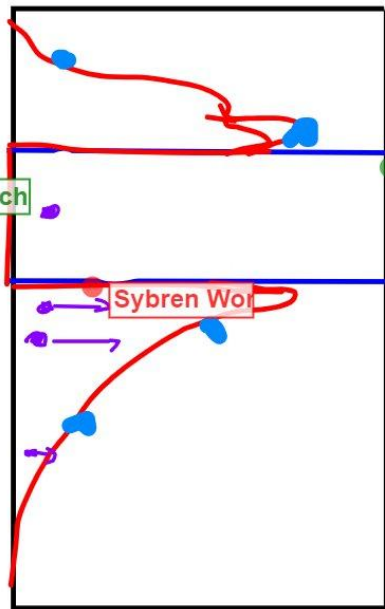
ω



k

ω

Wilmer Sch
Jasper van



DOS

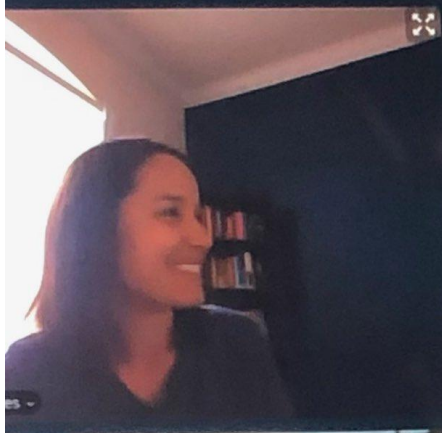
Handwritten notes and diagrams at the top of the page.

Vertical toolbar with icons for drawing tools: pencil, eraser, selection, and trash.



Kelly Buckles

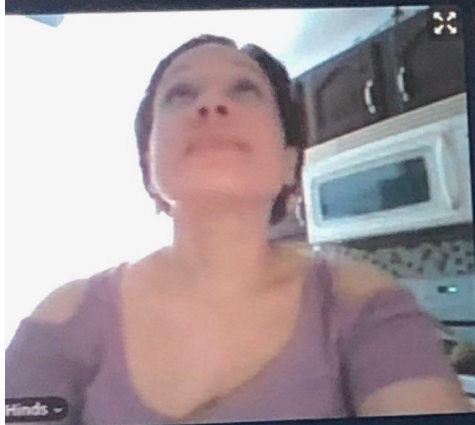
Priscilla Hinds



Krysten Nuredini



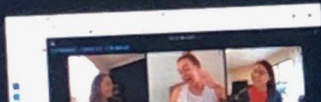
Pamela Parsons



Hinds



Rose Alonso



Why does BigBlueButton Exist?



SUSTAINABLE DEVELOPMENT GOALS



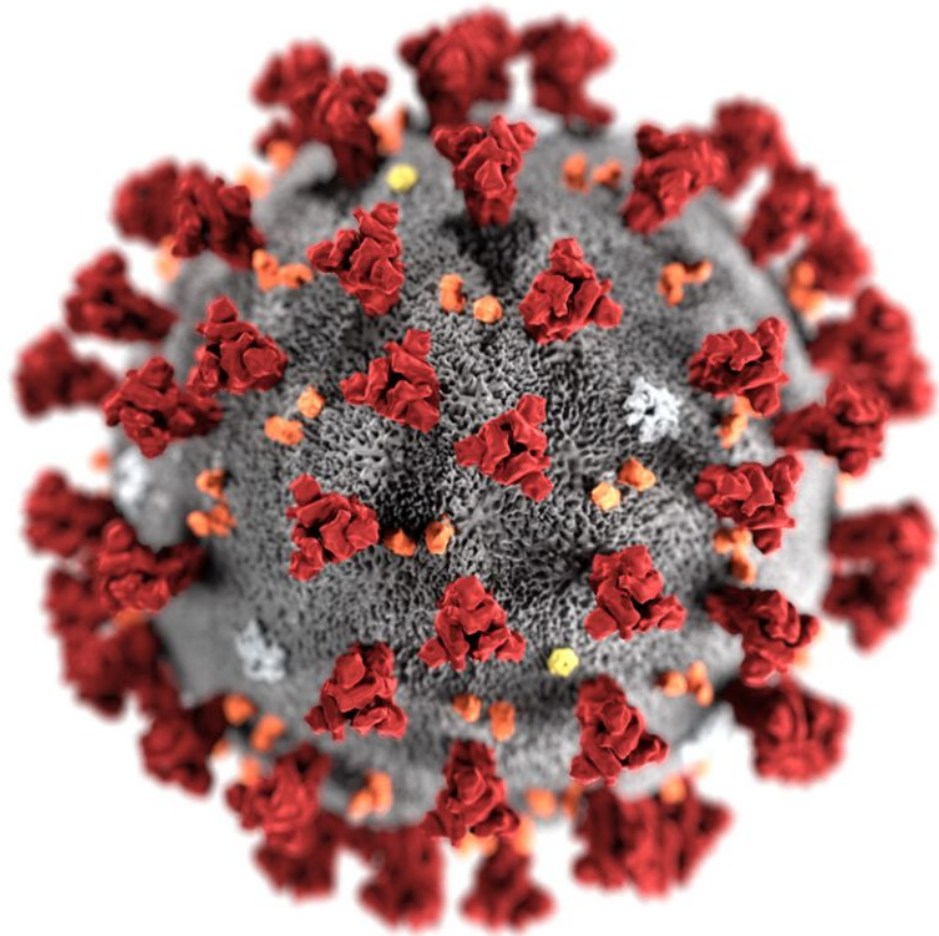
United Nations Educational, Scientific and Cultural Organization



Education Transforms Lives

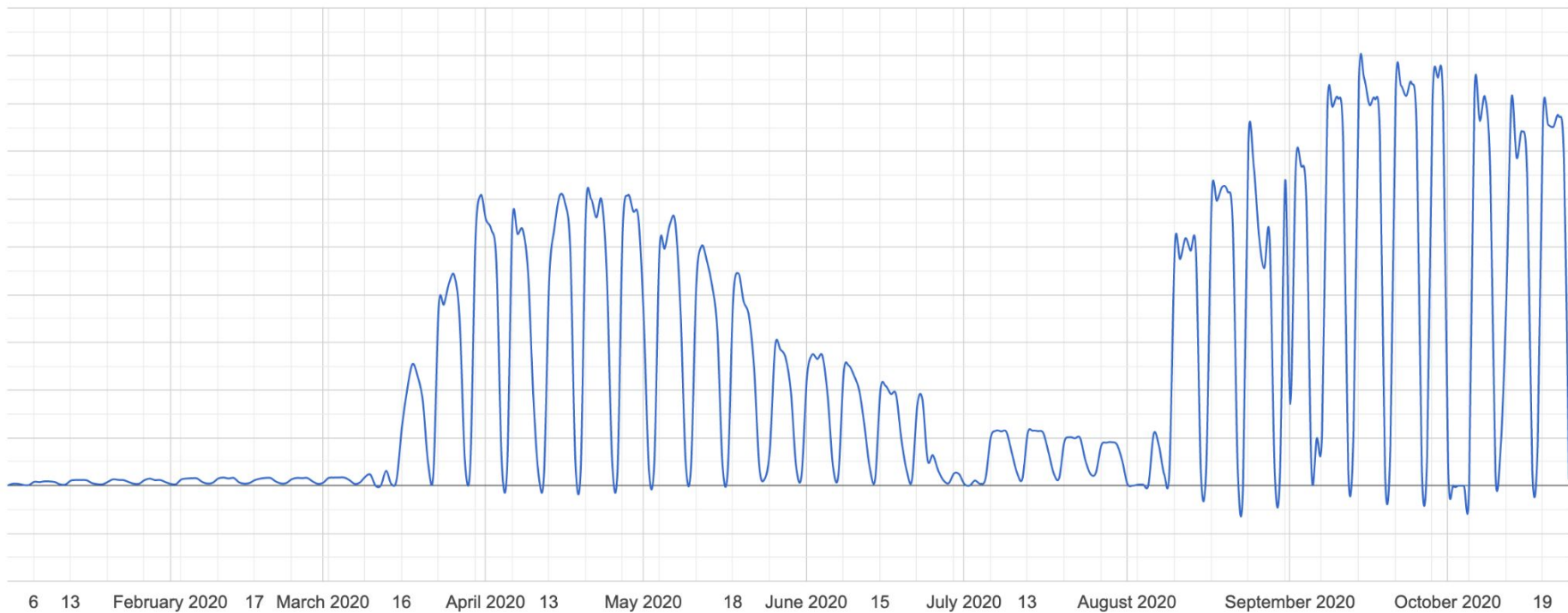
BigBlueButton

*empowering the world's educators to
teach online*



What happened during the pandemic?

60x





— HOW IT STAFF ENSURED XJTLU COULD KEEP TEACHING

24 June 2020

<https://www.xjtlu.edu.cn/en/news/2020/06/how-it-staff-ensured-xjtlu-could-keep-teaching>

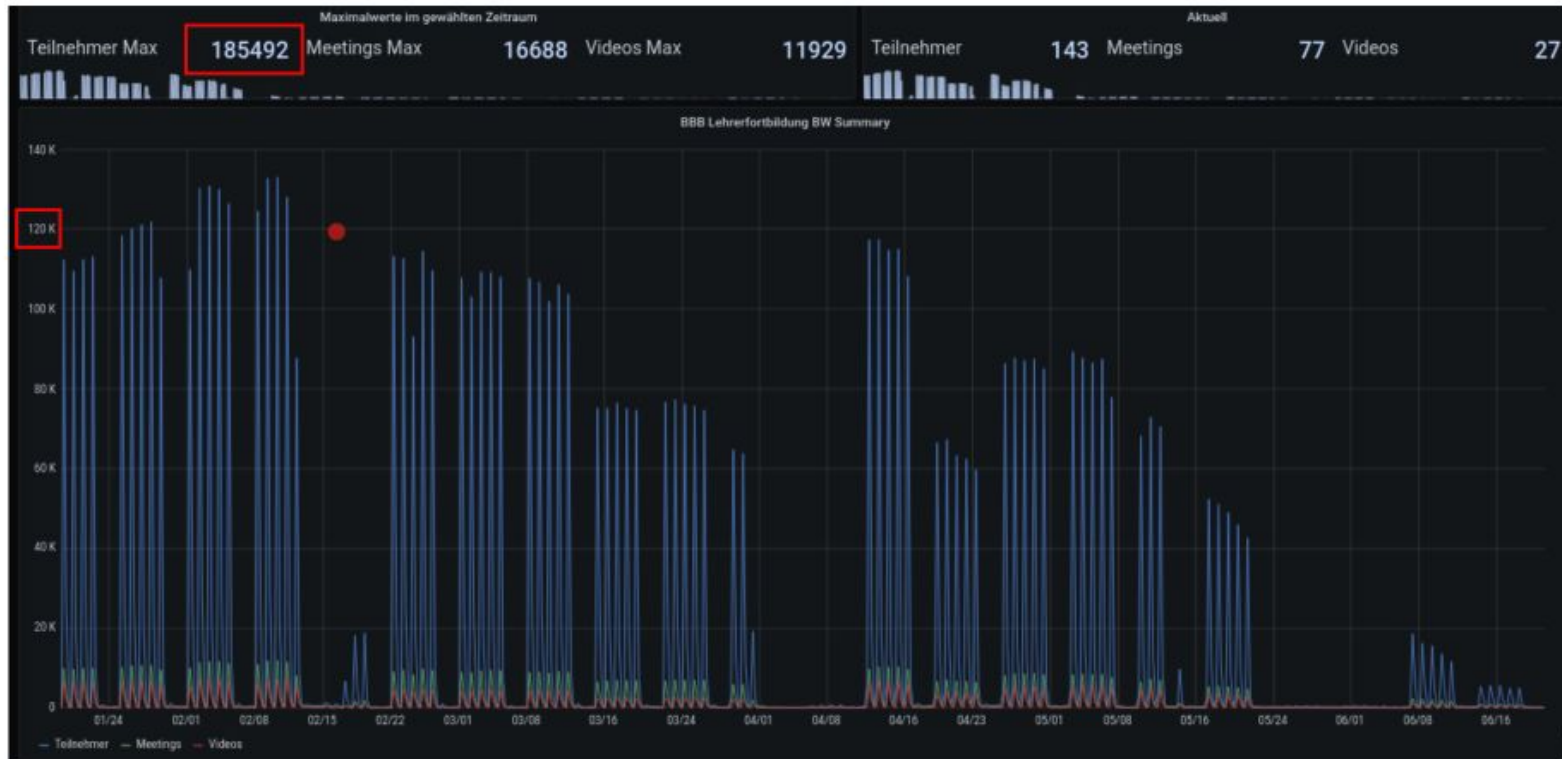
How it all
started ...

BigBlueButton
on Powerfull
Machines

Scaling the
Infrastructure

Upgrading to
BBB 2.3

More than 185000 parallel users



⁶Note: The scale on the left is to low, because of the averaging window.

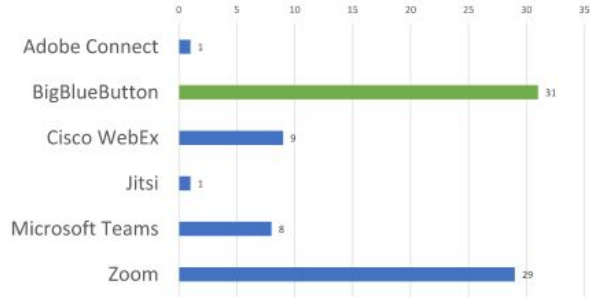


Vincent Heuveline



Urgent Need for On-Premises Solutions

Which solution do you use? (n=79)



Survey on Software Solutions in Universities, June 2021



What did we learn?

Traditional video conferencing tools (for business) **are not** well suited for online classrooms

Boardroom vs. Classroom

	Business	Education
Role	Manager	Teacher
Objective	Collaborate on tasks according to a corporate objective	Teach students new skills and knowledge according to a curriculum
Preparation	Review minutes	Review lesson plan
Collaboration	One-to-many	One-to-many, group collaboration, individual (no collaboration), and one-on-one coaching
Outcome	Updated minutes	Assign learning activities
Participants Role	Subordinates	Students
Frequency	Periodic	Regular
How users enter sessions	Corporate account	Learning Management System

The student's role is different than employee's role

	Employee	Student
Objective	Work towards a common goal, complete a task	Individually learn new knowledge and skills
Preparation	Complete task	Complete homework
Role	Listen to progress from others	Listen to understand
Engagement	Report on individual process	Apply new knowledge and skills to reinforce learning
Outside for meeting	Work towards a task	Study and learn
Assessment	Complete task	Demonstrate mastery

Three main objectives for teacher

You are a teacher and you have 60 minutes for the class. In that time you have three main objectives:

1. **Manage** the class to create an effective learning environment
2. **Engage** the class to effectively teach
3. **Coach** individual students

Manage the class

You want to

1. **Moderate** unwanted behaviour
2. **Reward** desired behavior

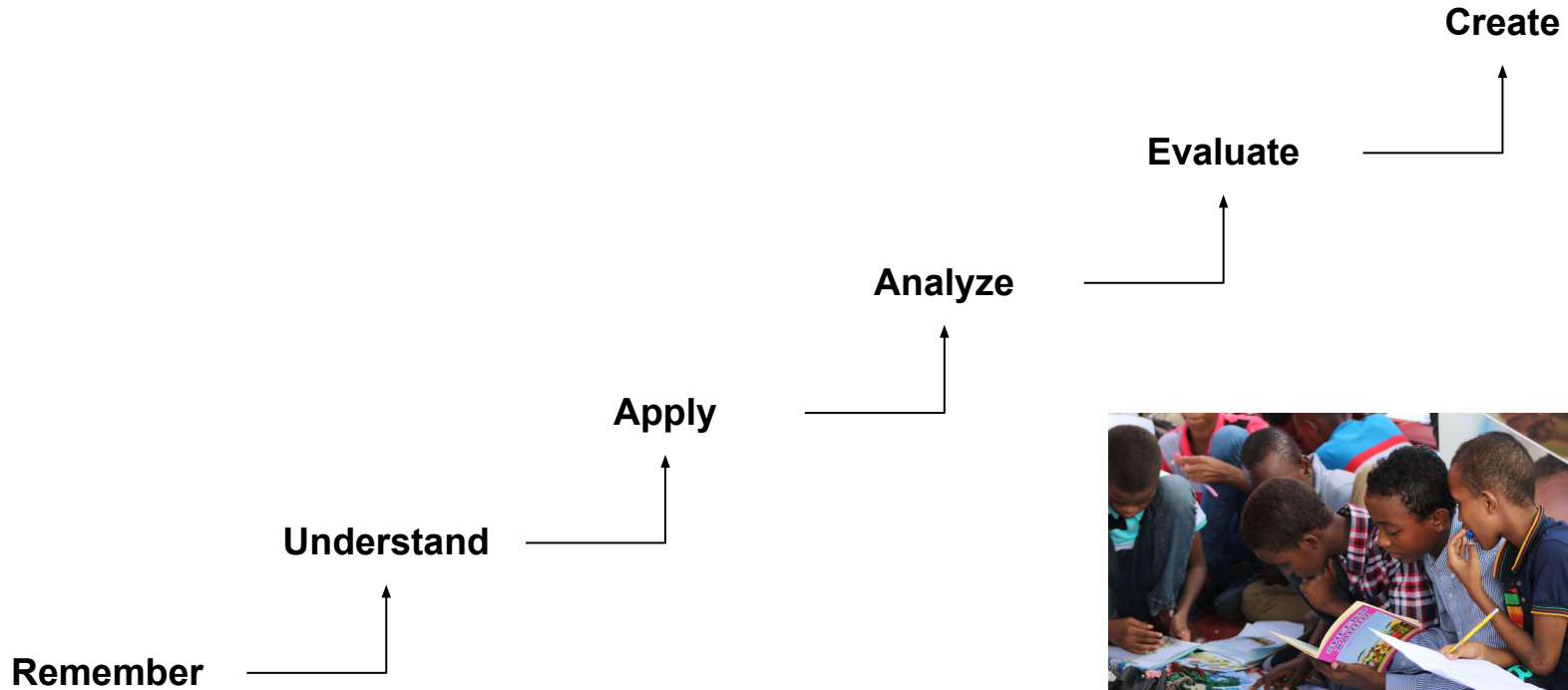


Engage the class

- Our brains go through different stages when learning
- Our brains are more open to learning when our assumptions are challenged



Bloom's Taxonomy



Coach individual students

We all remember that particular teacher that spent a few minutes with us and helped us move forward.



Challenges to individual engagement

1. They are already busy moderating and teaching the class as a whole
2. The modes of communication are more limited online in the virtual classroom vs. the physical classroom
3. Every student learns at their own pace, so how does a teacher track 25 individual students online to know when is the best time to coach the individual?

Vision for Virtual Classrooms

Can we turn the limitations into advantages?

Advantage #1: Everything is tracked.

Advantage #2: All students can participate.

Advantage #3: Switching modes is almost instantaneous.

Advantage #4: The virtual classroom is integrated with the LMS.

Advantage #5: The recording can be continuously reviewed.

Think of the virtual classroom as your **teaching copilot**.

1. Built-in classroom management capabilities
2. Focuses on helping you engage students according to theories of learning
3. Constantly helping the teacher (based on data in live class and LMS) to know
 - a. Student participation (via engagement)
 - b. Student learning (via answers to polls/quizzes)

BigBlueButton
By Teachers for Teachers

Classroom Management

Lock viewers

These options enable you to restrict viewers from using specific features.

Feature	Status
Share webcam	Unlocked <input type="checkbox"/>
See other viewers webcams	Unlocked <input type="checkbox"/>
Share microphone	Unlocked <input type="checkbox"/>
Send Public chat messages	Unlocked <input type="checkbox"/>
Send Private chat messages	Unlocked <input type="checkbox"/>
Edit Shared Notes	Unlocked <input type="checkbox"/>
See other viewers in the Users list	Unlocked <input type="checkbox"/>

Cancel

Apply

Engagement for Learning

Helping students learn

	Remember	Understand	Apply	Analyze	Evaluate	Create
Polling	✓	✓			✓	
Chat		✓	✓	✓	✓	
Emoji					✓	
Shared Notes						✓
Multi User Whiteboard		✓		✓		
Breakout Rooms			✓	✓	✓	✓

Teaching Copilot

Learning Dashboard

Learning Dashboard

ENGL-2013: Research Methods in English

Sep 30, 2021 Active

Duration: 00:03:26

3
Active Users



2
Polls




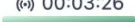







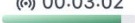




1
Raise Hand



5
Activity Score



Overview

USER ↓	ONLINE TIME	TALK TIME	WEBCAM TIME	MESSAGES	EMOJIS	RAISE HANDS	ACTIVITY SCORE	STATUS
 Fred 🕒 Sep 30, 11:47:50 AM	 00:03:26	 00:00:27		 1				Online
 Student A 🕒 Sep 30, 11:48:10 AM	 00:03:06	 00:00:38					 4	Online
 Student B 🕒 Sep 30, 11:48:14 AM	 00:03:02		 00:00:24	 1		 1	 6	Online

Learning Dashboard

Learning Dashboard

ENGL-2013: Research Methods in English

Sep 30, 2021 Active

Duration: 00:04:16

3
Active Users



2
Polls



1
Raise Hand



5
Activity Score



Polling

USER ↓	WHO CREATED THE THEORY OF RELATIVITY?	POLL 2
Student A	Einstein	True
Student B	Fenymann	True
Anonymous		

Open Source

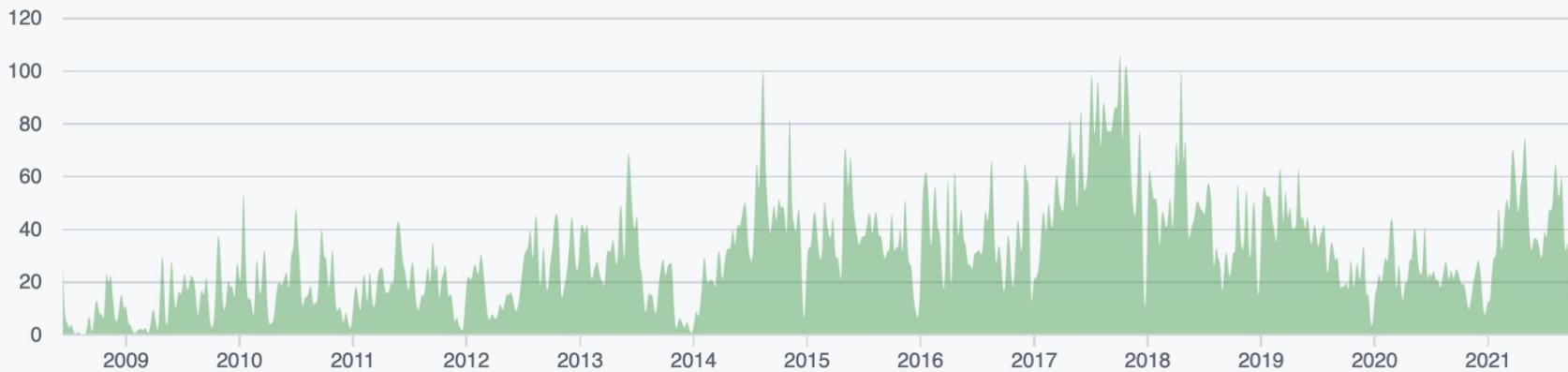


99 developers from around the world (and growing)

Jun 15, 2008 – Sep 30, 2021

Contributions: Commits ▼

Contributions to develop, excluding merge commits and bot accounts



Community: Localization

BigBlueButton 2.3 is localized into 55+ languages

Future:

- Continue to leverage Transifex

60 Project languages 1 without translators

Arabic (ar) 0 strings to translate 816 strings to review



Bengali (bn) 0 strings to translate 816 strings to review




Divehi (dv) 0 strings to translate 816 strings to review



French (fr) 0 strings to translate 816 strings to review



German (de) 0 strings to translate 547 strings to review



Japanese (ja) 0 strings to translate 816 strings to review



Dutch (nl) 4 strings to translate 812 strings to review



Italian (Italy) (it_IT) 3 strings to translate 813 strings to review

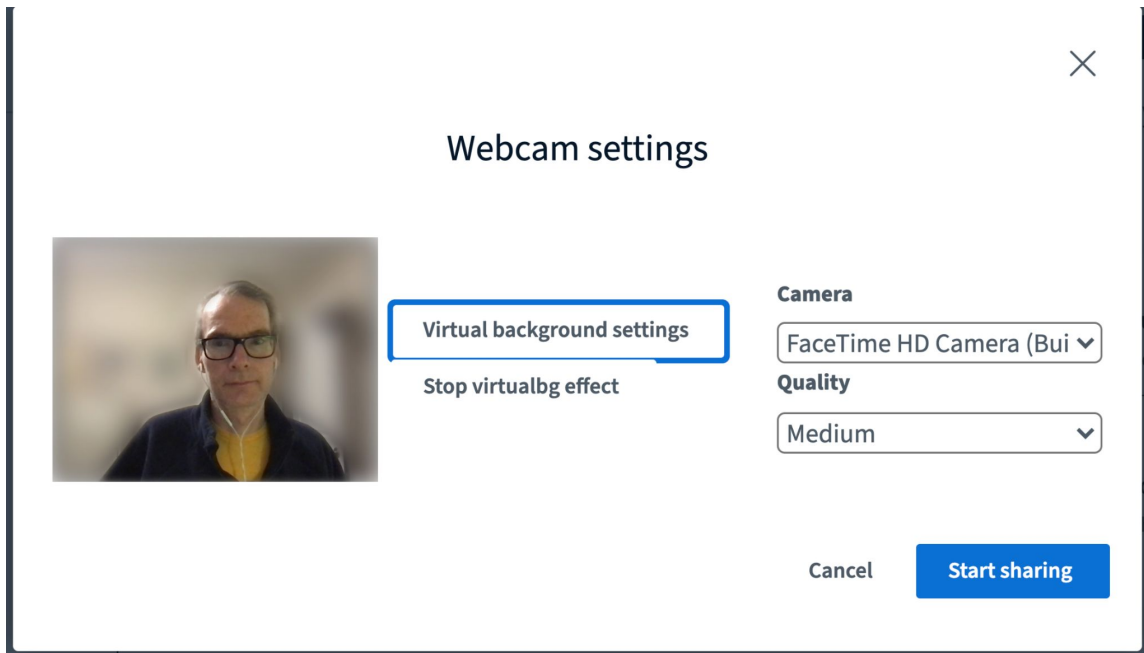


[Show all languages](#)

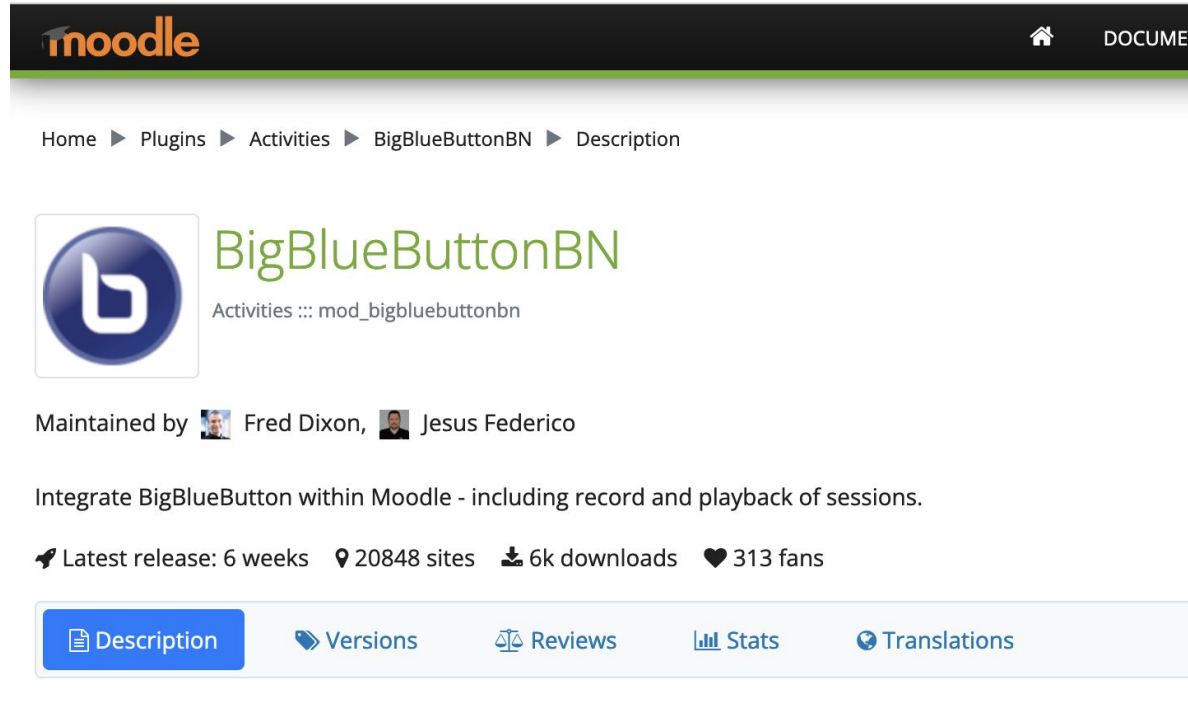
Recent pull request: Background Blur

LionGate AG has contributed a pull request to implement background blur!

<https://github.com/bigbluebutton/bigbluebutton/issues/9131>




BigBlueButtonBN Moodle (> 20k sites)





The screenshot shows the Moodle plugin page for BigBlueButtonBN. At the top, the Moodle logo is on the left, and a home icon and the word 'DOCUME' are on the right. Below the logo is a breadcrumb trail: Home > Plugins > Activities > BigBlueButtonBN > Description. The main content area features a circular icon with a white 'b' on a blue background, followed by the text 'BigBlueButtonBN' in green and 'Activities ::: mod_bigbluebuttonbn' in grey. Below this, it says 'Maintained by' followed by two profile icons and names: Fred Dixon and Jesus Federico. A paragraph of text reads: 'Integrate BigBlueButton within Moodle - including record and playback of sessions.' Below that, a row of statistics is shown: a flag icon for 'Latest release: 6 weeks', a location pin icon for '20848 sites', a download icon for '6k downloads', and a heart icon for '313 fans'. At the bottom, there is a horizontal menu with five buttons: 'Description' (highlighted in blue), 'Versions', 'Reviews', 'Stats', and 'Translations'.

moodle

Home > Plugins > Activities > BigBlueButtonBN > Description

 BigBlueButtonBN
Activities ::: mod_bigbluebuttonbn

Maintained by  Fred Dixon,  Jesus Federico

Integrate BigBlueButton within Moodle - including record and playback of sessions.

🚩 Latest release: 6 weeks 📍 20848 sites 📄 6k downloads ❤️ 313 fans

[Description](#) [Versions](#) [Reviews](#) [Stats](#) [Translations](#)

BigBlueButton is going into Moodle 4.0!



Summary

Education is key to our future.

The virtual classroom should function as a copilot for helping teachers teach and learners learn

The BigBlueButton project leverages a world-wide community of developers, teachers.

End

Fred Dixon
ffdixon@bigbluebutton.org