

Lanka Education and Research Network

**DIGITALIZING RESEARCH & EDUCATION CONTENT ON LEARN
FOSS FREE OPEN CLOUD PLATFORM**



**VIRTUAL CLASS
ROOM (VCR)**

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Introduction

LEARN has implemented set of software in its **private cloud**

The tools can be
“accessed”
via **“internet”**
“Software as a Service”

Introduction

Following services are available to use:

(<https://learn.ac.lk/index.php/service/foss-services>)

- ODRaas – Open Digital Repository
- LEARN Event Management System
- LTube – LEARN Tube
- Moodle as a Service
- WordPress as a Service
- LEARN virtual Class Room (vCR)
- LIAF – LEARN Identity Access Federation
- EduID
- IaMlaas
- EduRoam
- EduVPN

Big Blue Button (BBB)

- An open source web conferencing system
- Designed specifically for **online teaching and learning**
- Runs directly in a web browser
- Support interactive learning not just for video calls
- Integrated with popular LMS platforms (Moodle, Canvas, Sakai, etc.)

Big Blue Button (BBB)

- Project started in 2007
- Originated at Carleton University, Canada
- Initially known as the Blindside Project
- First developed by Richard Alam
- Supervised by Tony Bailetti
- In 2009, Richard Alam, Denis Zgonjanin, and Fred Dixon founded Blindside Networks to support the project commercially while keeping it open source.

BBB : Key Features for Teaching

- Real-time video & audio conferencing
- Screen sharing & presentations
- Breakout rooms for group activities
- Shared whiteboard & annotation tools
- Public & private chat
- Polling & quizzes
- Recording sessions for later access
- Learning dashboard
- Waiting room
- Emoji reactions & raise hand

Why Use BBB in Universities?

- Supports interactive, student-centered learning
- Encourages active participation
 - through polls, breakout rooms, and collaboration tools
- Attendance tracking & learning analytics
- Open-source → Cost-effective & customizable
- Ensures data privacy (self-hosting option available)
- Seamless integration with existing LMS
 - Moodle/Canvas

Big Blue Button vs Zoom

Feature	BigBlueButton	Zoom
Primary Purpose	Online teaching	Online meetings
Open Source	Yes	No
Self Hosting	Yes	No
Moodle Integration	Native	Plugin/LTI
Whiteboard	Advanced (Multi-User)	Basic
Shared Notes	Yes	No
Breakout Rooms	Yes	Yes
Learning Dashboard	Yes	No
Attendance Analytics	Yes	Attendance only
Customizations	Fully customizable	Limited options
Recording	Cloud	Cloud/Local

Advantages Over Zoom

- Open Source
- No vendor lock-in
- Self-hosted
- Better privacy and data control
- Native LMS integration
- Designed for teaching
- Better classroom engagement tools

VIRTUAL CLASS ROOM (VCR)

- Alternative to Zoom (with the most of Its features)
- Hosted in the LEARN Free Cloud
- Powered by Big Blue Button
- LEARN vCR is available at no additional cost
- Data-free via all major local ISPs
- Accessible on any device (PC, smartphone etc.)

Core Features - LEARN vCR

- No dedicated apps/software needed
 - just use your daily web browser
- Unlimited licenses for FREE
 - for all campus SSO and eduID staff account holders
- Real-time audio and video conferencing
- Very low internet bandwidth in webinar mode
 - Over 1000 participants
- Screen sharing and clear slides delivery

Core Features - LEARN vCR

- Automated attendance report over email
- Learning analytics dashboard for student engagements
- Auto audio captions
- Annotations, shared notes
- Waiting room, breakout rooms
- Visual assessments
- Live streaming on youtube/facebook with streaming software like OBS

What is Webinar Mode?

Presenter	Audience
Can speak	Listen only (raise hand to speak)
Can share screen	Cannot share screen
Can use webcam	Webcam disabled
Can upload presentations	View presentations
Moderate participants	Participate when permitted
Can use public and private chat	Private chat to moderators only
Can see who has joined	Only moderators are visible

One or a few presenters, many attendees.

Advantages of Webinar Mode

- Suitable for hundreds of attendees
- Better audio quality with fewer active microphones
- Reduced background noise
- Easier session management
- Professional event experience
- Ideal for public events and conferences
- More attendees since less resource usage
- Less bandwidth and data needed

Data-Free Access for Distance Education

vCR sessions hosted through LEARN can be accessed without consuming data charges when users connect through major local ISPs.

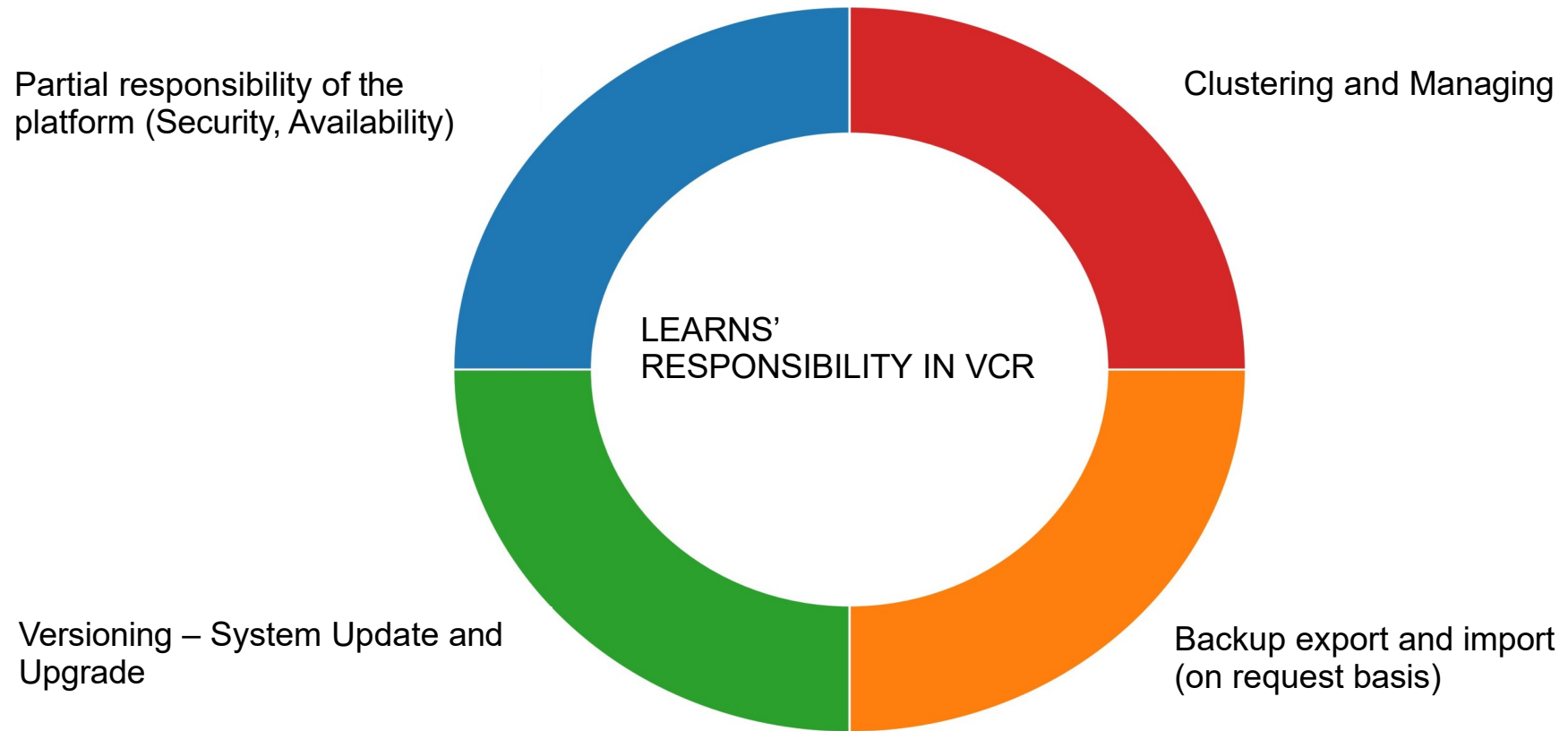
- Enables students to attend live classes even with limited mobile data.
- Reduces the financial burden of purchasing internet data packages.
- Improves access for students in remote and underserved areas.
- Ensures equal learning opportunities regardless of students' economic background.
- Encourages continuous participation in online lectures, seminars, and webinars.

Live Streaming

vCR sessions can be live streamed to platforms such as YouTube using straming software like OBS, allowing a much larger audience to watch the event.

- Reaches audiences beyond the meeting capacity.
- Suitable for public lectures, conferences, and university events.
- Viewers can join easily using a web browser without installing additional software.
- Reduces the load on the BigBlueButton server, improving performance for active participants.
- Stream recordings remain available for students who cannot attend the live session, supporting asynchronous learning.

LEARNs' Responsibilities in vCR



Responsibilities of Educators In vCR



Lanka Education and Research Network

Thank You!



National Research & Education Network of Sri Lanka