Virtual classrooms: an overview

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Introduction to virtual classrooms

What is a Virtual Classroom?

A virtual classroom is a tool for delivering classroom-like sessions, live over the Internet. It can be used for delivering:

- an audio/video window for the moderator
- a presentation slide window
- a window for typing questions about the session
- a tool for launching websites on the participants' workstations
- a survey tool providing immediate statistics to the moderator
- a real-time chat window
- an application tool providing access to faculty and participants' desktops.

What this paper will do for you

In this paper we look at open source and commercial virtual classroom options and present you with the following information:

Why consider Virtual Classrooms?

The recession has forced all organisations to review their training costs. Many organisations have reduced their training budgets or even put a ban on travel to training and other events. Virtual classrooms along with other online learning initiatives provide opportunities to continue to deliver learning cost-effectively in this climate.

The cost of virtual classrooms are reducing and the quality of the events is improving all the time thanks to better internet bandwidth and improved compression methods. There are also open source tools available which have increased competition in the virtual classroom market. The advent of hosted 'software-as-a-service' (SaaS) solutions also means that you don't need to buy software or enter into long term agreements; you can buy virtual classroom services as you need them.

Making the most of Virtual Classrooms

We offer some useful tips on how to get the best out of virtual classrooms and useful resources to make your virtual classroom really work for you.

Which Virtual Classrooms should you consider?

There is an ever-growing list of virtual classroom software options. In this paper we have focused on our current top products. Please note that where we have listed information from vendor's websites, this was correct at the time of writing, but is of course subject to change.

Our current top virtual classroom products

It is important to stress that the market is changing rapidly, not least with the growth of open source solutions. Our current top recommended virtual classrooms are as follows:

Open Source and Free Tools	Commercial
Big Blue Button	Webex
WiZiQ	Adobe Connect
	Elluminate
	GoToMeeting

Ones to watch…

As the market continues to develop there are new virtual classroom software and services becoming available. Current ones to watch are:

Open Source and Free Tools	Commercial
OpenMeetings	Livemeeting
Skype	Convenos
Slideshare Zipcast	Gensys
	3FGSP

The good news is that you don't need to tie yourself to any particular supplier. You can try out a number of tools to find out what works best for you.

How to get the best out of your Virtual Classroom

We would strongly recommend the eLearning Guild's Guide to <u>Synchronous e-Learning</u> which contains a wealth of top tips.

Below are our top tips:

Design your virtual classroom session

In most cases a virtual classroom doesn't happen in isolation. It may be part of a wider more blended solution. A virtual classroom might be used to launch a learning initiative. It might then be followed by learner activities such as reading, undertaking some self-paced e-learning or an assignment. This might then be followed by a virtual classroom.

The nature of the virtual classroom will be influenced by this context but you also need to be clear as with any other learning intervention what the learning objectives are for the session and you will address them.

Plan your interactions

You should consider how you will interact with learners in your virtual classroom. You have a range of tools including:

- voice
- chat
- whiteboard
- screen sharing
- document sharing
- polls
- breakout sessions

It is advisable to encourage interaction from early on in the session. This can be done as an online poll where you ask a question and get feedback which is shared with all learners. By using regular polls you can ensure your learners have to actively engage much as you would do if you were designing a piece of e-learning. Thus rather than simply presenting information, you would cognitively engage learners by asking them what they think or checking their knowledge.

Use presenters

If you have a large group it can be very useful to have two presenters. One presenter can be talking whilst another responds to chat questions or prepares the next activity.

Plan your space

Make sure you have a suitable space for running your session, this includes:

- a quiet space
- a good internet connection
- a back up computer

Storyboard your session

You can storyboard your session which might look as follows:

1. Introductory instructions and ground rules for participants.

2. Breakdown the overall session into segments.

3. Identify the learning objective of each segment and the content that you will use in this segment.

4. Delivery method in each segment, plan what will you be showing or doing at each stage.

5. Technical checklist — Identify the technology that will have to be turned on, or in place, for the delivery method to work. Start application sharing. Convert and load PowerPoint files. The Technical checklist serves as a to-do list.

6. Identify who will speak and what they will say at each point.

7. Plan your interactions and instructions for activities, polls, and open-ended questions for each segment.

8. Schedule regular relevant interactions, particularly questions, throughout the session.

9. Think about what responses the participants are likely to say or do. List likely answers to an open-ended question, points of confusion on the activity, and reminders about using the software.

10. Plan how participants will do an activity and tell them to respond appropriately. "Please click on your answer in the polling list you see on your screen."

11. Agree your session follow up activities.

Some useful links

http://en.wikipedia.org/wiki/Web_conferencing

http://en.wikipedia.org/wiki/Comparison_of_web_conferencing_software

What's out there? Our top open source virtual classrooms

DimDim

For the past few years DimDim has been the darling of the open source virtual classroom tools, available both as an open source download so that you can run it on your own servers, and as a free or paid hosted service. We found that Moodle integrated very well with DimDim using a freely available plugin and many of our customers used this successfully.

Founded in 2007, DimDim was acquired in January 2011 by Salesforce.com for $31m. Initially a software-as-a-service CRM vendor, Salesforce.com is transitioning to an "enterprise cloud computing company" and the intention of the acquisition is to extend their existing Chatter collaboration platform with DimDim's real-time communication technologies such as messaging and screen sharing.

Unfortunately for DimDim users, the service is being discontinued. Monthly subscription accounts will expire during March 2011 and annual subscriptions will be allowed to naturally expire but not be renewable. Anyone using API integration such as the Moodle DimDim module will be able to use it until their subscription expires. Existing recordings or uploaded documents will no longer be available.

While the open source DimDim project was hosted on SourceForge, the company will no longer contribute to it. However this does not mean that other developers cannot take up the mantle, but they will have their work cut out. The open source project has not been actively maintained and had not been updated since December 2008. A number of developers and potential sponsors have already created a new project based on this codebase so it's very much a case of 'watch this space'.

DimDim 4.5 is the latest open source version that the new project has been created from. Features include:

- Document sharing and presentation
- Desktop sharing and presentation
- Whiteboard sharing
- Audio and video sharing
- Recording and playback of meetings
- Multiple presenters
- Public and private chat
- Annotations and Markup tools
- Scheduled Meetings
- Outlook integration for eMail & Calendaring
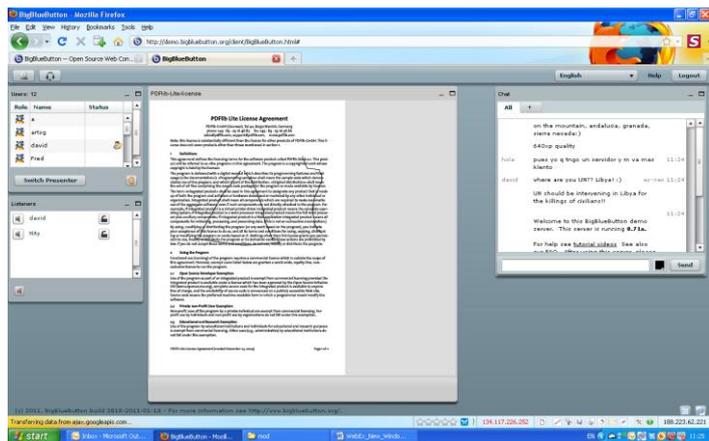- LMS integration
- CRM integration.

Big Blue Button

http://www.bigbluebutton.org/

This is an increasingly popular open source webinar tool, especially now that DimDim is being discontinued.

BigBlueButton has a higher education sector focus. It is an active open source project that focuses on usability, modularity, and clean design - both for the user and the developer.

The screen is split into a number of areas for web participants, voice participants, presentation, group and private chat, web cam and desktop sharing.

Three roles exist in BigBlueButton.

- **Viewers** can raise their hand to get the attention of the presenter, see all participants, watch presentations, conduct public or private chats, share video using a built or external webcam and see where the presenter is pointing to by the indication of a red circle.

- **Presenters** can mute or eject participants, upload and share any PDF or Office document and share a portion of their desktop or the entire screen.

- **Moderators** can make anyone a presenter.

System integration

BigBlueButton has been integrated into other software including Drupal, Moodle, Sakai, Joomla!, eFront, Wordpress and RedMine.

Blindside Networks, the team behind BigBlueButton itself, have created BigBlueButton Activity Modules for Moodle 1.9 and Moodle 2.0. Using the activity module, a teacher can:

- Add a BigBlueButton activity link to a class

- Specify a name for the virtual classroom

- Specify whether students must wait until a moderator joins the virtual classroom

http://moodle.org/mod/forum/discuss.php?d=166528

Dual Code Inc. have also created an open source Moodle activity module. When setting up you can choose either to configure with a locally hosted BBB application or Dual Code's hosted service (Dual Code developed the plugin so it includes integration with their hosted BBB service, there are a few other companies offering BBB hosting but the module won't natively integrate with them).

http://moodle.org/mod/data/view.php?d=13&rid=3524

What's out there? Our top commercial virtual classrooms

Cisco WebEx

http://www.webex.co.uk/

WebEx is a popular virtual classroom tool and one which we have found at Kineo to be a very reliable choice for running large webinars to over 100 people.

WebEx has a range of products including:

- **Meeting Centre** for up to 100 attendees

- **Training Centre** for up to 1,000 attendees

- **Event Centre** for up to 3,000 attendees

All three feature the following:

- Sharing desktop, application, web browser/content

- Whiteboard, presentation and document sharing

- Play Flash and streaming audio/video

- Session recording

- Annotation tools

- Text Chat

A detailed comparison is available online at http://www.cisco.com/en/US/prod/ps10352/product_comparison.html
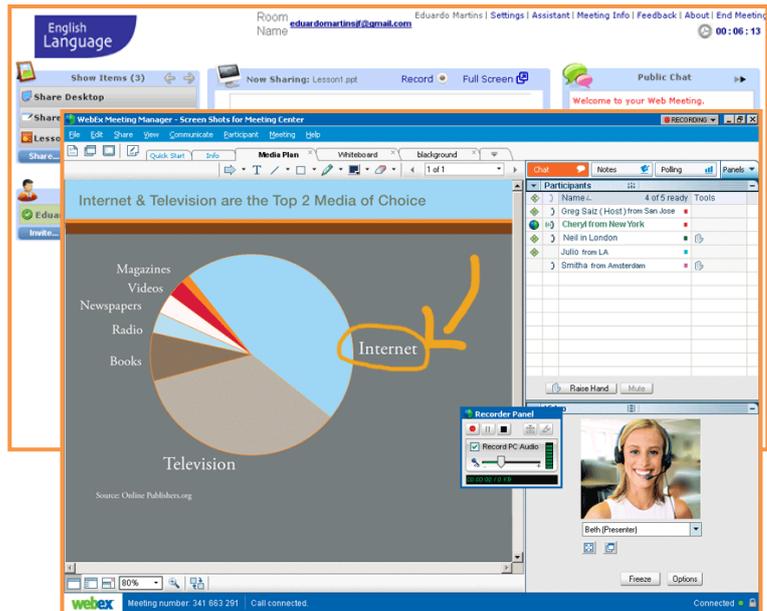
Subscription

WebEx can be purchased as either:

- pay-as-you-go

- monthly subscription

- annual subscription

System integration

There are currently no Moodle modules available for WebEx. However, Kineo has been working on a module in partnership with a corporate customer which works with WebEx Training Centre. This is scheduled for release in the next major version of Totara, at which point it will be simultaneously contributed to the Moodle community as an open source module for Moodle 1.9

The WebEx module for Moodle will allow administrators to create and manage WebEx sessions from within a Moodle Course. Learners can select to enrol on the WebEx sessions, again within the Moodle Course; at no point do they leave the LMS. The Presenter has the ability to start the WebEx session from within Moodle, at which point the enrolled learners can also join the session from within Moodle. Only at this point does the WebEx Player window open to launch the virtual classroom session.
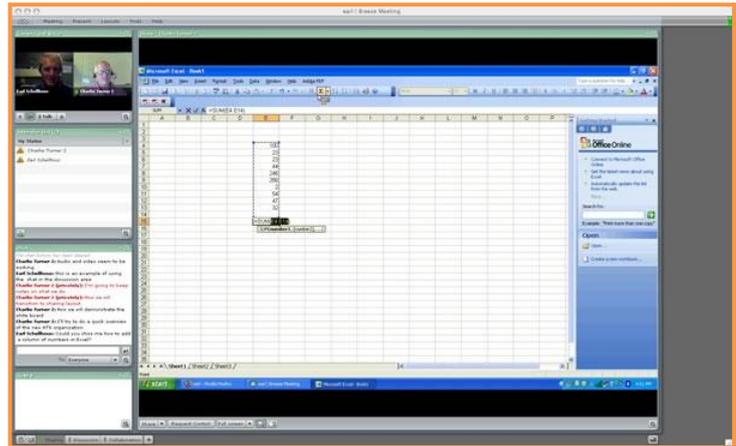
Adobe Connect

Adobe Connect is a Flash based product so no downloads are required to join meetings. It is aimed at the corporate and government sectors. You can buy a hosted subscription or download and install the application to your own server.

Acrobat Connect 8

Features include:

- Simple user experience
- View attendees
- Audio and video controls
- Text chat
- Note taking
- Question and answers area
- Whiteboard and screen share
- Breakout rooms

Subscriptions

Adobe Connect can be purchased as a hosted service by small businesses and individuals. Companies, government agencies, and educational institutions have a choice of either:

- Hosted services on annual subscription basis
- On-premise installations comprising Perpetual license plus annual maintenance and support
- Managed services comprising perpetual license plus annual maintenance and support and service fee

Moodle integration

Several Moodle activity types exist for Adobe Connect.

Remote Learner have published an open source Adobe Connect module. This works best if you have your own locally installed Adobe Connect server. If you have an Adobe Connect hosted account, the authentication will not work as seamlessly, meaning users will have to login again to each webinar session when joining it from within Moodle.
http://moodle.org/mod/data/view.php?d=13&rid=3599

Refined Data have also developed a commercially available Adobe Connect module for Moodle. This plugin works with hosted solutions and is the more feature-rich of the two available plugins; however it is not free or open source.
http://www.refineddata.com/index.php?option=com_content&view=article&id=103&Itemid=92
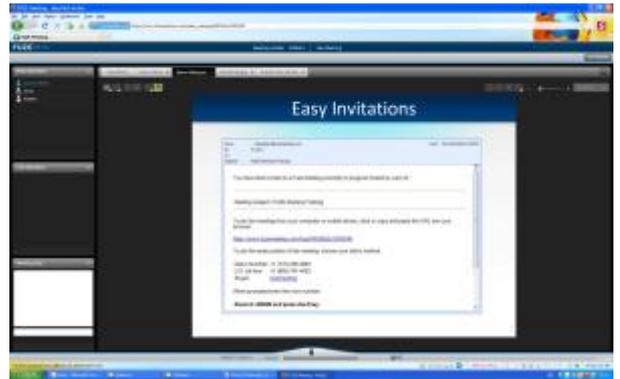
Fuze Meeting

Fuze Meeting places a lot of emphasis on its ability to view High Definition (HD) content which allows you to zoom in and pan across without pixilation loss, and the ability to offer fully-synchronised desktop sharing without the time lag that is often experienced with other products.

Other than that the usual standard feature-set applies:

- Present graphics, video, images, documents and other content

- Share screen or applications

- Integrated conference call

- Attendee control and management

- Meeting recording

Fuze Meeting seems aimed more at the small to medium sized business, with annual or monthly subscription options only scaling up to 100 attendees rather than the thousands offered by WebEx. That said, it does pitch itself directly against WebEx and GoToMeeting in its marketing literature and is priced very competitively. Corporate pricing is available on request.

System integration

There is no publicly available developer documentation, so interested parties are forced to become Fuze Partners to gain access to API documentation with which system integration projects can be designed. There is no Moodle plugin available to date.

GoToMeeting

GTM has a suite of three products in a similar vein to the WebEx offering. These are:

- **GoToMeeting** for up to 15 attendees

- **GoToWebinar** for up to 1,000 attendees

- **GoToTraining** for up to 200 attendees

Basic features are shared between all three products:

- Desktop or Application Sharing

- Change Presenters

- Share Keyboard and Mouse Control

- One-Click Recording

- Drawing Tools

- Audio Conferencing

- Instant meetings

GoToWebinar adds support for audience management, polls and surveys, hand raising, participation dashboards and reports, guest panellists, Q&A, practice areas and even a pre-event green room!

GoToTraining adds in some basic learning management features like course catalogues, recorded session sharing, class sizes, online tests and content library. Like other virtual classrooms that have moved in learning management features, this is very much 'LMS-Lite' territory and no match for a fully featured LMS like Moodle or Totara.

GoToMeeting is available on monthly or annual subscription, while GoToWebinar and GoToTraining are priced on application.

Elluminate

Elluminate Learning Suite comprises three products:

- **Elluminate *Plan!*** focuses on organising, scripting, and packaging content and activities before your live session

- **Elluminate *Live!*** is the virtual classroom component.

- **Elluminate *Publish!*** is the session recordings component that publishes video files for playback or download.

They also offer:

- **Elluminate vRoom** for up to 3 attendees

- **Elluminate vOffice** for up to 50 attendees

- **Elluminate vClass** for up to 400 attendees

Standard features across all products include:

- Shared, interactive whiteboard

- Text chat

- Integrated teleconferencing

- Import PowerPoint, StarOffice and OpenOffice

- Participant status indicators

- Instant polling

- Emotion and activity indicators

- Announcements
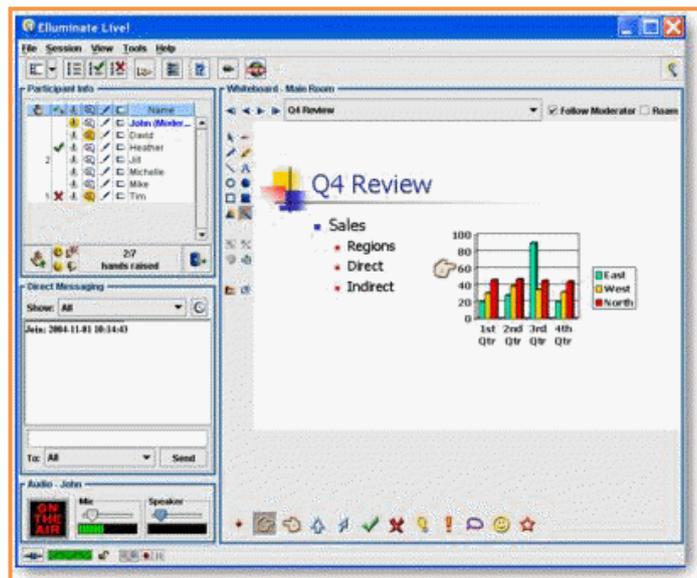
- Session reporting

LMS integration

Only **Elluminate *Live!*** contains an API which allows integration with your LMS.

Remote Learner have published the Elluminate Bridge for Moodle which allows:

- Scheduling and delivery of Elluminate *Live!* sessions

- Single-click access to Elluminate sessions

- Ability to create, store, and view Elluminate recordings

- Ability to assign moderator and participant roles

- Ability to assign sessions to groups within Moodle

http://www.elluminate.com/Products/Elluminate_Learning_Suite/Elluminate_Bridges/Moodle_/?id=178

WiZiQ

WiZiQ is focussed firmly on the education sector so is very much built around the student/teacher relationship. It extends the traditional virtual classroom platform by adding in social networking features that allow users to join groups based on common interests. It is a software-as-a-service company so there is no downloadable application that you can run behind your firewall.

Features include:

- Images, PowerPoint presentations and documents

- Full way audio and video sharing

- Live chat

- Automatic recording

- Social networking based on shared interests

WiZiQ for Moodle

To use the free Moodle Module you must purchase an Organisation account, as opposed to a Student or Teacher account. Once the module is downloaded and installed into your Moodle site, course editors can start creating live, online classes from within your Moodle installation. There are separate modules available for Moodle 1.9 and Moodle 2.0. Features include:

- Screen sharing

- Co-branded virtual classroom

- Block attendees

- Changes of class date, time and other class settings

- Secure classes and recordings

- Download recordings

- Class status and attendance report

- Schedule a class for a group or groups in your course

Introducing Kineo in 2 Minutes

Kineo provides end-to-end e-learning solutions. Our goal is to help you accelerate performance and deliver value by taking a fresh approach to e-learning.

We commit to delivering quality, on time, on budget, every time for all of our clients.

Our core services are:

- Custom e-learning: from rapid 20 minute modules to 20 hour blended solutions

- Portals and LMS with Moodle and Totara: Using open source tools to deliver engaging portals and enterprise LMS solutions

- Consultancy and capability building: helping your team to develop skills in house and master authoring tools

We've partnered with some of the world's leading organizations, including BP, Canon, HSBC, Google, McDonald's, Motorola and Nikon.

We're not in it for awards, but they're good to get: We won E-learning Company of the Year (November 2008, E-learning Age Award), Gold Award for Excellence in E-learning 2010, and many others besides.

We can help you with:

Custom and Rapid E-learning

We develop highly customized e-learning solutions, with a full range of interactivity and media, for clients including Google, Canon and Nikon. We have extensive experience in areas including product knowledge, compliance, sales, induction/on-boarding, health and safety, performance management and more, from 20 minute rapid e-learning modules to 20 hour blended solutions.

Online Portals and LMS with Moodle and Totara

We provide rapid, cost-effective tailored and hosted learning management systems including Moodle, which we brand and customize to your needs. We can develop Moodle and Totara LMS solutions for on-boarding, compliance, resellers, performance management. We can scale down to a tactical solution or up to a full-blown Enterprise LMS through Totara.

Tools and Capability Building

We help develop capability in your e-learning team to ensure they can develop and deliver the rapid e-learning and performance solutions you need, including design and development skills transfer and authoring tools training sessions.

Strategic Consulting

We work in partnership with our clients to develop strategic approaches to rapid learning and performance improvement.

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