

Online Synchronous Teaching in Psychology: Testing the Big Blue Button

Maxine Swingler, Paul Bishop,
Donna Boyle.



University
of Glasgow | School of
Psychology

Background

Benefits of SD

- Feedback (Burnett, 2003)
- Dialogue (Chen et al., 2009)
- Engaging students (Bower & Hedberg, 2010)

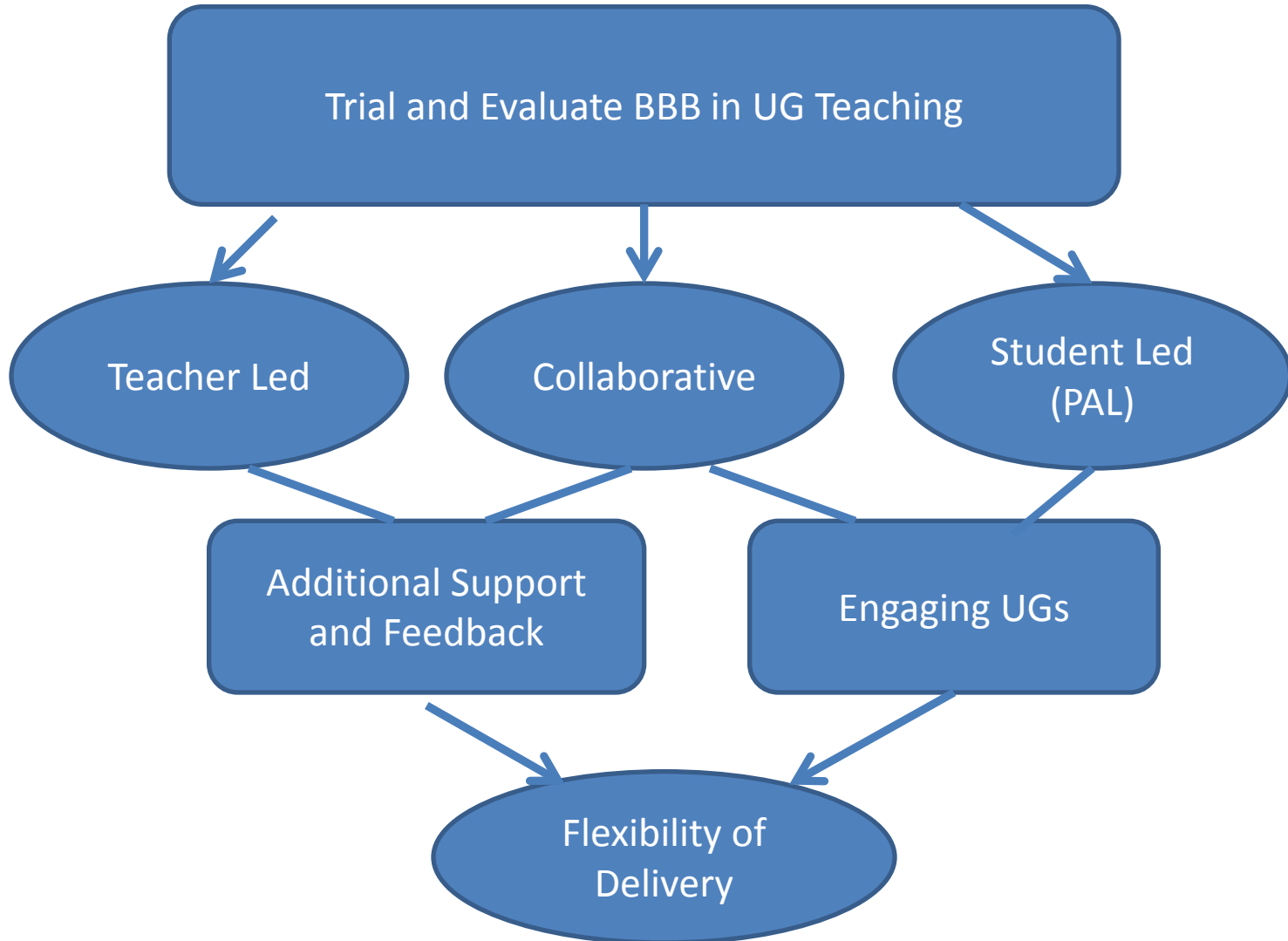
Virtual Classrooms in UK Unis

- Commercial Software
- Piloting of BBB

Glasgow

- Adobe Connect (PGT Distance course)
- BBB on Moodle (LTU)

Aims and Contexts



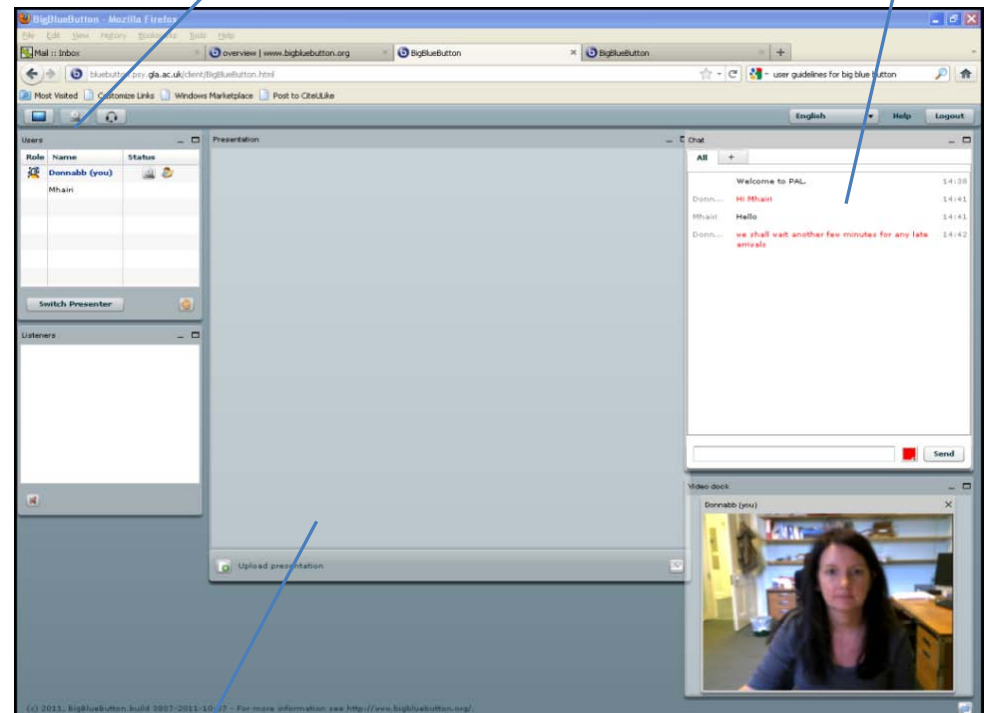
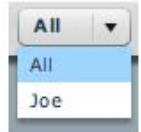
How BBB works....

- BBB Version 8.3 (Beta)
- Embedded within VLE (Joomla/Moodle)
- Moderator sets up meeting.
- Meetings accessed via meeting name and Password.

Share webcam/
microphone/headphones



Chat window
allows public
or private
chat



Status



Users with the role of Presenter appear with the presenter icon next to their name.

Collaborative Approach

- Level 3 Project Group (N=6)
- Students upload presentation (PDF) of their results in pairs.
- Feedback from tutor (Audio, Text)
- Q & A session (Audio, Text)

The screenshot shows a virtual meeting interface with the following components:

- Users:** A list of participants including 'chris + ashley', 'Donna (you)', 'lauren + Anna', 'maxine', and 'Orla'.
- Listeners:** A list of participants who are listening, including 'chris + ashley', 'Donna', 'lauren + Anna', 'maxine', and 'Orla'.
- PDF Content:**
 - Title: hypothesis 2 Anna & Lauren
 - Section: Descriptive Statistics- Accuracy
 - Graph: Bar Graph Showing Mean Accuracy Scores for High and Low Extraversion. The Y-axis is 'Mean Accuracy Score' (0.784 to 0.803) and the X-axis is 'Extraversion Score' (High and Low). The High Extraversion bar is at approximately 0.792, and the Low Extraversion bar is at approximately 0.798.
 - Section: Inferential Statistics
 - Text: 3 way mixed ANOVA, $F(1, 31) = 0.168, p = 0.685$
 - Section: Conclusion
 - Text: In conclusion, there are no main effects of extraversion on reaction times or accuracy.
- Chat:** A text chat window with messages from 'laure...', 'Donna', 'maxine', 'laure...', 'chris...', 'maxine', 'chris...', and 'maxine'.
- Video dock:** A video window showing a female tutor speaking.

Evaluation

What Worked	Problems	Lessons Learned
Upload presentation	Too many webcams	1 webcam per presenter
Tutor FB (Text)	Issues with Audio	Mute/switch off mics for non-presenters
Technical support and user guide	Unstructured Q&A	Qs via Text, Answers via Audio

“...i think BBB is helpful for long distance learning and pal sessions, but i don't think it should ever replace face to face group meetings”

“I think this is a good method but in our experience as it was our first time the whole group went to the same flat therefore background noise and lagging was emphasised, perhaps this should be discouraged for other groups.”

Teacher Led Session

The screenshot shows a Mozilla Firefox browser window displaying a BigBlueButton web conference. The main content is a presentation slide titled "Methods" with the following bullet points:

- Know the different types of method
 - Cross-sectional and Longitudinal
 - Advantages and Disadvantages of each
- Be able to design a study for each
 - Illustrating the Strength and weakness
 - e.g. efficiency in C-S, validity in Long.

The interface includes a sidebar on the left with a user list (Users: 18) and a listener list (Listeners: 16). The user list shows roles, names, and statuses for users like 1003559, 1003566, 1003661n, 1003940v, 1007599, Donna (you), and paul. The listener list shows names like 1000246o, 1000319c, 1002266k, 1002716c, 1002721, 1002750m, and 1002872s. A chat window on the right shows a timestamped message: "on the headphone icon". At the bottom right, a video window shows a man wearing a headset. The bottom status bar includes the Windows Start button, system tray icons, and the time 10:19.

Teacher Led Session

- Sessions 1 and 2
 - Supporting the Level 1 (N=5) and 2 essay (N=7)
 - PowerPoint presentation of 15 mins
 - Questions by text, answered in audio
- Session 3 (N= 17)
 - Revision session for level 2 course
 - PowerPoint presentation of 35 mins
 - Questions by text, answered in audio

Evaluation

What Worked	Problems	Lessons Learned
The presentation and audio were clear	Some tech niggles remain	You can use this software for largish groups (17)
The Q and A went well	Teaching did feel odd	Students found it very worthwhile
Even the long session was effective	Odd pauses as student typed their questions	Qs via Text, Answers via Audio + Silence the students as enter the room.
Technical support and user guide	Created a new expectation for support.	You can teach pretty effectively using this model

Obligatory upbeat quotes

“thank you very much for the big blue button revision session, it was really helpful and I feel a bit more confident about studying for the exams now!”

“Just wanted to say I found the virtual classroom session today extremely helpful and would be grateful if you could ask the other lecturers from other parts of the course to take part.”

“Very happy with the L2 revision session. Though it is quite fast paced & requires a lot of mental effort, perhaps because it is new? Far less intimidating/ daunting (sic) than asking a question in a lecture”

“Keep it to small groups - allows answering everyone's questions. Might be good idea for tutorials instead of in the classroom, students not as nervous, so ask more questions, much more interactive and fun”

“Very happy. The session was similar to a regular lecture. Even better that I could listen to it in my own preferred enviro, however I did not find a need for there to be a webcam.”

Student Led (PAL)

- Stress testing of BBB software
 - Volunteer PAL facilitators recruited (N=6)
 - 4 sessions of stress testing
 - Production of User Guides
- Variable structure on each session
 - Testing quality of audio & web images
 - Test presentation upload
 - Test altering the presenter status

Student Led (PAL)

- 3 sessions for level 1 & level 2 students
 - Questions relating to essay completion
 - Questions by text, answered via audio
 - PDF uploaded with general essay tips
- 3 sessions for level 3 students
 - Questions relating to write up of project results
 - Questions by text, answered via audio

Evaluation

What Worked	Problems	Lessons Learned
Stress Testing allowed for some technical glitches to be addressed	Some technical glitches remain	Use a different group to stress test before commencing Virtual PAL sessions with volunteers
The format worked well (text questions, audio answers)	Odd pauses as students typed their questions	Facilitators need to be better prepared to deal with lack of visual/audio feedback from attendees
Having a technical consultant logged on to assist with technical problems as they arise	Anxiety in facilitators due to the lack of peer support in the Virtual PAL setting	Have two PAL facilitators logged on to each session, for addition support in relation to topic
Provided further opportunities for students to obtain support from peers	Attendance was limited	Can be used to approach issues of attendance at PAL due to its flexibility of delivery

Qualitative Feedback

“I could ask questions without leaving my flat.” (Attendee)

“It was useful in helping me with the statistical analysis of my mini project.” (Attendee)

“ Overall I think it was positive, I could see the benefits, but the tech problems at the start made me very nervous.” (Facilitator)

“ You’re in a type of limbo, you don’t know when to stop speaking.” (Facilitator)

“Maybe it would help to have two facilitators online at the one session, then we wouldn’t be so worried about not knowing the answer as we would have some additional support of our own.” (Facilitator)

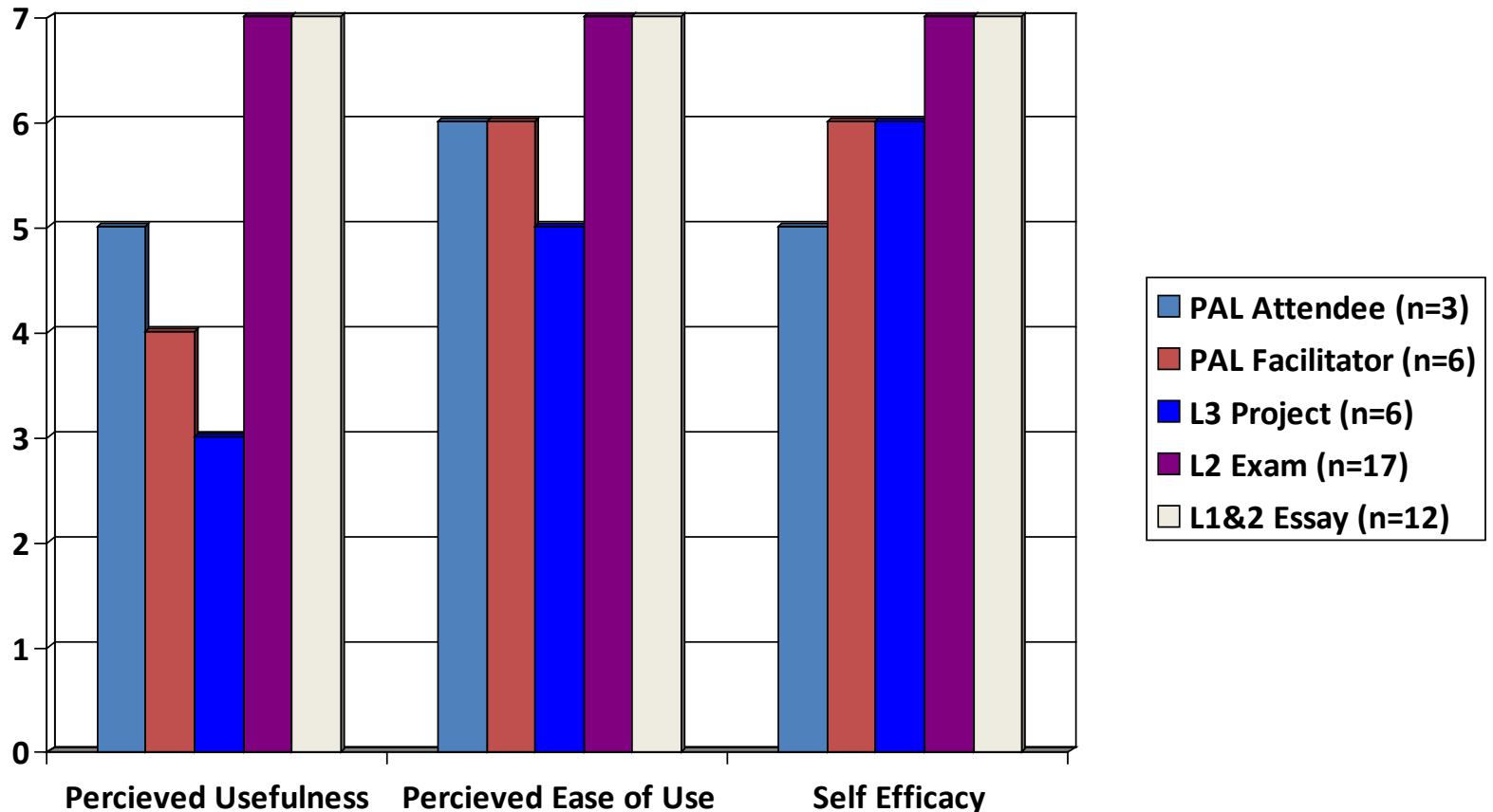
“Maybe people have to experience BBB in a different context first, such as teaching, and then they may feel more confident using it to attend Virtual PAL.” (Facilitator)

“It definitely removes the distance and timing barrier, which should increase attendance.” (Facilitator)

“it’s just something you need to get used to, like all new software.” (Facilitator)

Overall Ratings of TAM Measure

Median scores of 3 variables across contexts (range 1-7)



Overview

Best practice is context dependent

	Collaborative	Teacher Led	Student Led
Best Practice	One mic & web image live at any one time + Student presentation	Simple text + audio for Q & A session + Teacher led presentation	Simple text + audio for Q & A session + Tips uploaded as PDF
Further Requirements	A workable format for Q & A Session	Getting accustomed to rhythm of session	Attendance at sessions

Dissemination

- Information session aimed at teaching staff
 - Benefits of online office hours
 - Flexibility in group collaborations
 - Promote student engagement
 - Online tutorials
 - Online revision sessions
- Staff & Student user guides available via public resources on psychology portal

For more info on attending email donnab@psy.gla.ac.uk

<http://tinyurl.com/cfls8cq>

Looking to the Future

- Regular developments & improvements made to BBB software
 - Remove performance restrictions
 - Use BBB in more complex formats
 - Record and playback of BBB sessions
 - Allow access to BBB via smart phones/ tablets
 - Enables delivery of teaching to remote students
 - Provides staff/students with more flexibility



Acknowledgements

Funding provided by University of Glasgow, Learning and Teaching Development Fund

John McClure (Computing Support Manager)

Mhairi McDonald (Technical Consultant)

Johanna Stenson (Technical Consultant)

Johanna Kempe (Technical Consultant)

PAL Volunteers - Gauri Rege

Cassandra Ali

Lorna Robinson

Eve Crawford