A Mass Collaboration Approach to E-Learning: Multiple Venue Production

by Tim Neumann and Allan Carrington

Summary (for printed edition of ALT-N)

On 21st March 2006 Diana Laurillard from the London Knowledge Lab (LKL) interacted with more than 450 learners at 41 university campus locations in Australia and New Zealand via a multinational live webinar. The event used Synchronous Audiographic web Conferencing (SAC) to provide simultaneous communication and interaction opportunities using multiple media and modes. The event was produced by the University of Adelaide in cooperation with the LKL, as a Multiple Venue Production (MVP). This case study discusses the organisational and pedagogical opportunities and challenges experienced in planning and implementing this 'mass collaboration' event.

Introduction

Synchronous audiographic web conferencing (SAC) technology has come of age and it is now possible to create effective real-time e-learning. SAC technology shows a high potential for education: it is comparably low cost, accessible, suitable for small and large groups, offers a variety of tools for meaningful interaction and has applications in a wide range of settings. However, pedagogy may have to change to capture the potential of the multimodal medium and to address the needs and characteristics of learners from the Net Generation.

In March 2006, we implemented a multinational live webinar, produced by the University of Adelaide in cooperation with the London Knowledge Lab (LKL), University of London, as a Multiple Venue Production (MVP). In this MVP, Diana Laurillard from the LKL interacted with more than 450 learners at 41 university campus locations in Australia and New Zealand with the aim to stimulate rich and meaningful exchange between participants by blending the dynamics of face-to-face seminars with online synchronous collaborative techniques, resulting in mass collaboration. This case study addresses the organisational elements and pedagogical concepts behind the production of the webinar.

Background

SAC refers to a combination of several technologies to provide simultaneous communication and interaction opportunities using multiple media and modes. Typical functions include: multi-way live audio transmission; a shared display of visual information with collaborative drawing facilities; and text-based chat. Presence indicators, emoticons and instant voting functions are methods for eliciting quick responses and to manage participant involvement. Specialised tools include: screen and application sharing; live video transmission, instant file transfer; and breakout rooms for small group interaction. These functions are combined in a coherent user interface, such as the Elluminate system used in this case study (Figure 1).

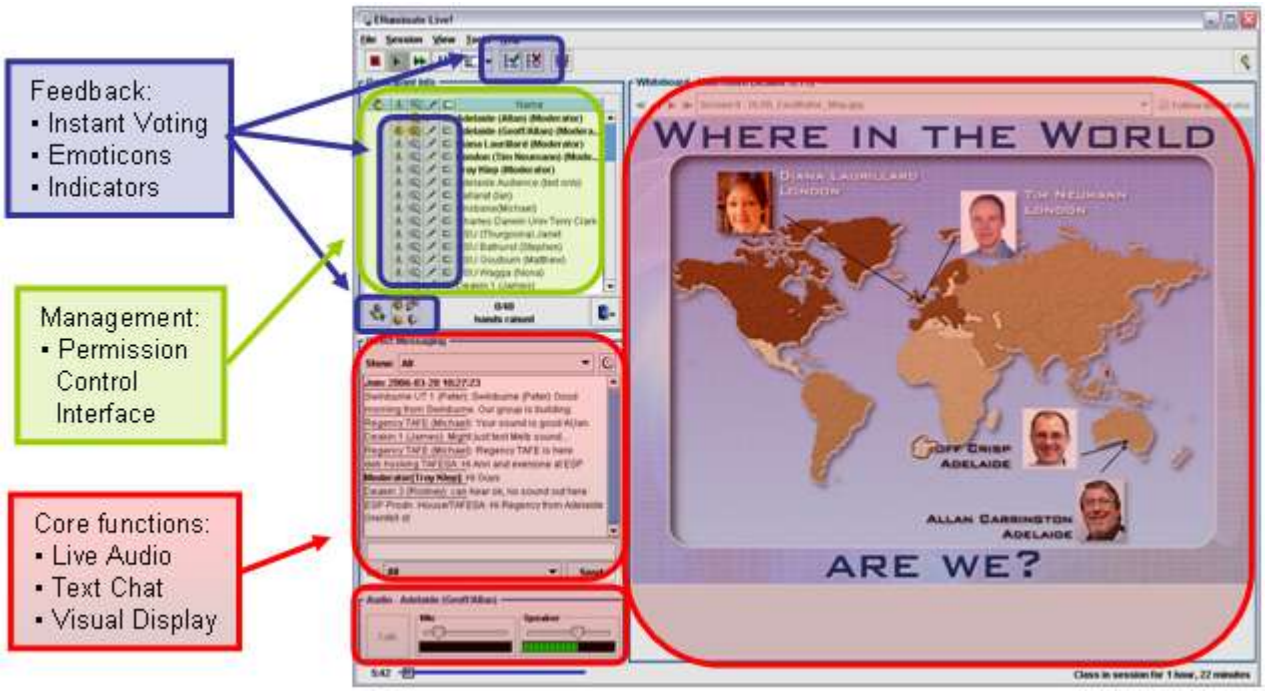

Figure 1: Components of the SAC system Elluminate.

Pedagogic research on SAC systems is sparse (Erben 1999, Schullo et al. 2005). One notable exception is the task design approach for language learning (Rosell-Aguilar 2005, Hampel 2006) based on the Open University UK's *Lyceum* system (see Hampel 2003, Hampel & Hauck 2004). However, more generic pedagogic models that address the multi-modal characteristics and help develop strategies to include SAC in larger teaching contexts are largely absent. Several practitioner guides for working with the technology have recently been published, some of which address pedagogic issues on the level of activities, but not on higher granularity levels, which would help the integration of SAC in modules or courses (Hofmann 2004a & 2004b, Brandon 2005, Finkelstein 2006, Hyder 2007).

In the absence of a generic pedagogical model for SAC, we based our approach on the "Community of Inquiry" framework developed by Garrison and Anderson (2003), (Figure 2). This model acknowledges the inseparable relationship between personal meaning making and social influence in shaping the educational transaction, as well as recognising the interplay between individual meaning and socially redeeming knowledge. Our approach was based on Carrington's (2005) application of the Community of Inquiry framework, initially developed for asynchronous learning, to SAC contexts and live e-learning.

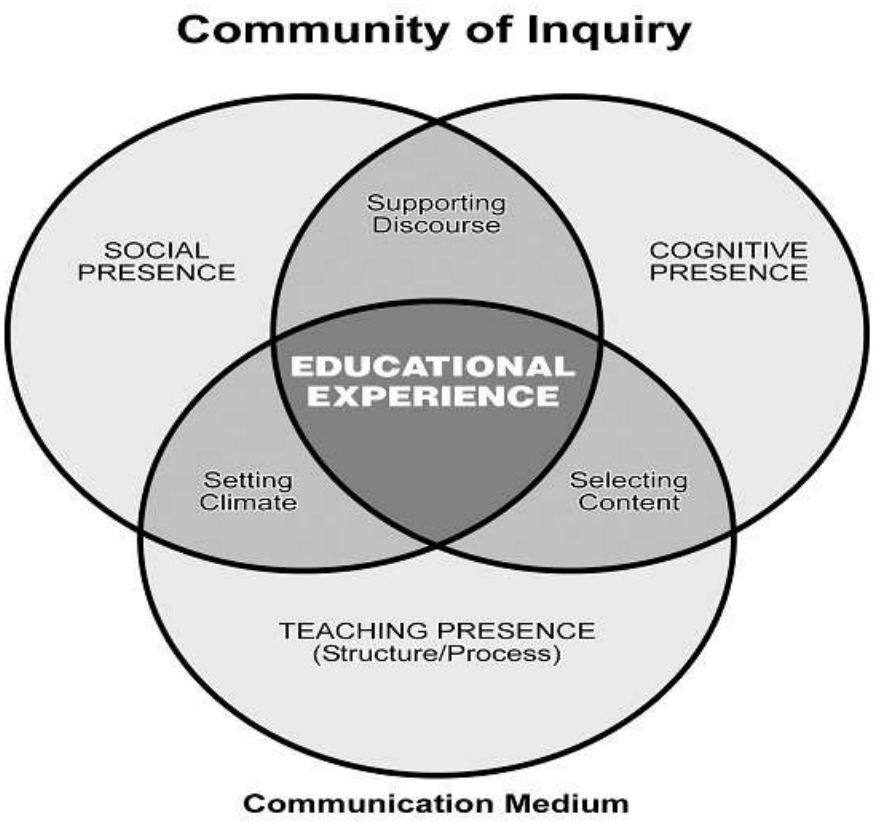

Figure 2: Community of Inquiry framework (Garrison et al. , 2000)

Webinar Preparation and Implementation

The webinar took place on 21st March 2006. It was designed as a professional development activity for university lecturers and teaching support staff. The event was entitled *Harnessing the Power of e-Learning in Higher Education*, and the content was largely based on *E-Learning in Higher Education* (Laurillard, 2005), which was circulated before the event as a pre-reading.

The event was initiated by Allan Carrington from the Centre for Learning and Professional Development at the University of Adelaide. In 2005, Carrington produced a similar event on the *Net Generation* (Carrington 2006), which won a live online learning award (www.thelolas.com). Tim Neumann at the London Knowledge Lab provided additional planning and implementation support, coordinated the UK activities, and implemented the evaluation in close relationship to an accompanying research project.

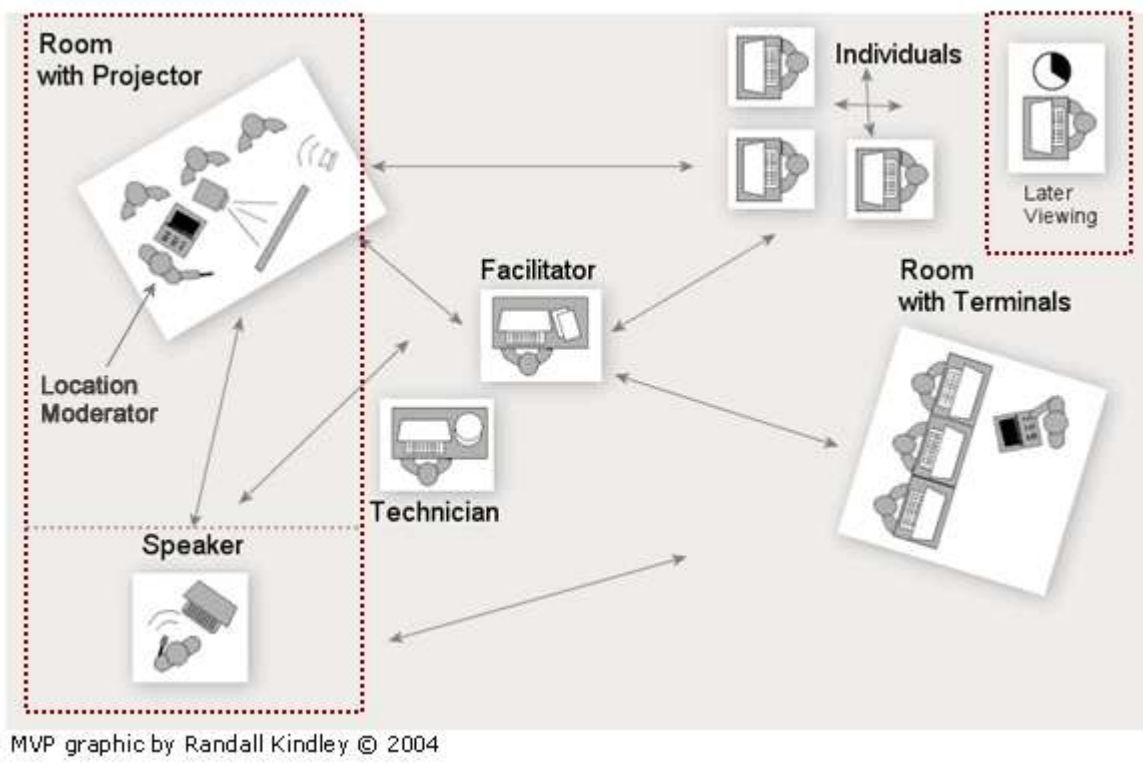

Figure 3: Multiple Venue Presentation. Adapted from Randall Kindley (Balzer 2004).

The format of the event followed the idea of a MVP (Balzer 2004). In a MVP, the session leader, here referred to as a *speaker*, is remote to most other participants. SAC technology is used to connect the speaker with other venues. Venues can be either individuals on their own computers, or a group of people in a room, where the SAC interface is projected onto a large screen (figure 3). Participants feed back to the session leader either by using a roving microphone or by relaying their information to a location moderator. With this method, it is possible to reach and include high numbers of participants at the same time, although it raises pedagogical challenges when the venues are a mix of groups and people on individual machines. Table 1: MVP roles provides an overview of various roles in MVPs.

Role Title	**Description**
Speaker	General session leader, who provides core content and sets the topic
Moderator / Facilitator	Acts as chairperson and guides the thematic/content aspects of the session
Producer / Director	Oversees the general flow of the session and moderates between speakers, facilitators and operators
Operator	Supports technical and functional aspects during a session
Location Moderator	Venue-based chairperson to lead local discussions and activities
Location Producer	Venue-based facilitator to handle and orchestrate functional aspects of the interface, and to support the location moderator in organisational aspects
Participant	Students, learners, guests and visitors, who should be actively engaged in the session

Table 1: MVP roles

Preparation for the webinar started four months before the event and was based on the strategy used for the preparation of the *Net Generation* seminar series. Figure 4 gives overview of the activities involved and the preparation timeline.

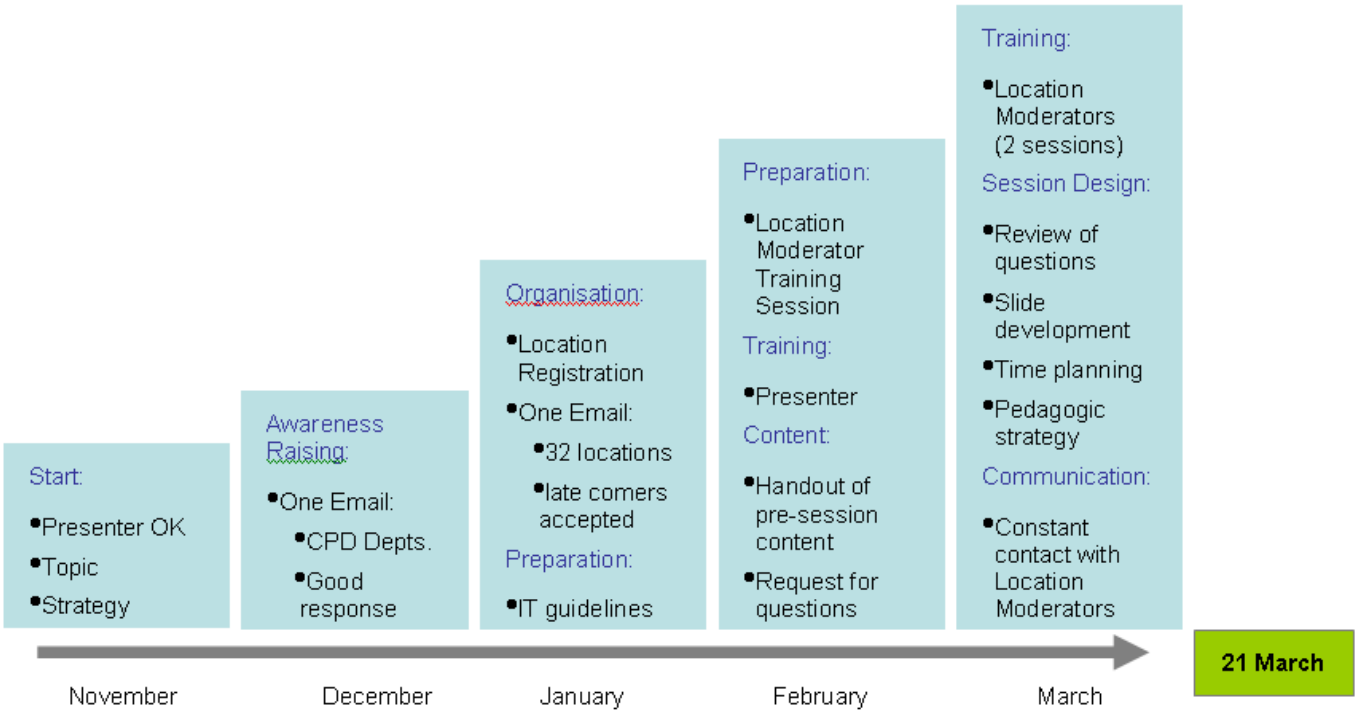

Figure 4: MVP preparation timeline.

A number of challenges were encountered in planning and implementing the webinar. A significant issue in planning any synchronous intercontinental event is timing: time zone differences of up to 13 hours demand dedication and commitment from participants. We decided to hold the event in the Australian morning, which meant 10.30pm to 0.30am in London, while Western Australian participants had to log on at 7.30am.

A second challenge is related to briefing and training participants. Participants were provided with links to existing support material on the Elluminate website. Location producers and moderators were kept up to date with regular mass emails and participated in a mandatory webinar briefing session, which we offered three times. Both speaker and event moderator were trained in using the SAC platform in separate face-to-face sessions, followed by an online webinar meeting.

The main challenge encountered during the event was encouraging participation. We wanted to involve all participants actively and to make the content relevant to them. As a consequence, participant involvement began before the actual event: based on the mandatory pre-reading, we asked for questions arising from the text, including issues participants wanted to see addressed in the MVP. Two weeks before the event, we received submissions from seven locations and adjusted our plan of live activities. Based on recommendations from practitioner guides and our own experiences, our session storyboard divided the event into two parts (Figure 5).

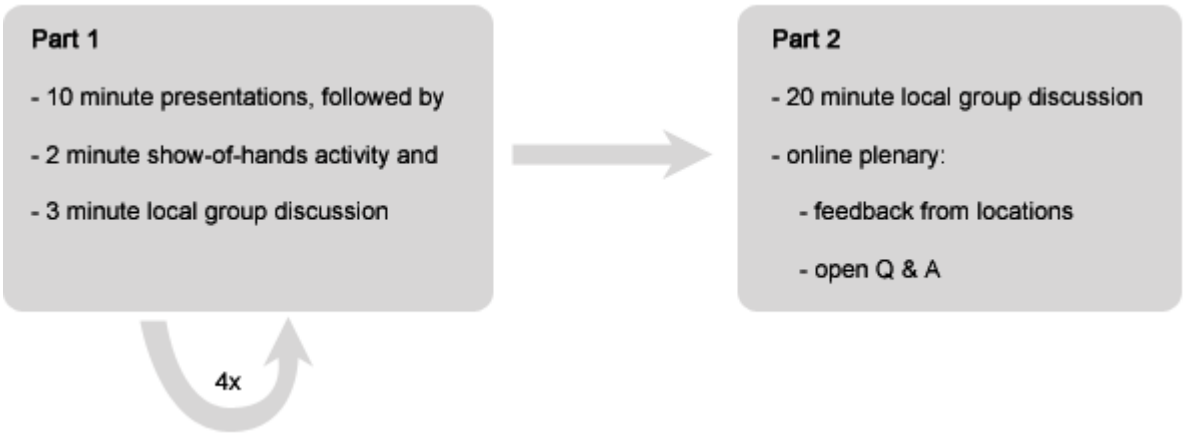

Figure 5: Simplified Storyboard overview

We hoped to generate enough opportunities for individuals at each location to be active, either in local or online discussions, and to provide a basic level of exchange between locations, so that participants might be inspired by ideas from other campuses. The questions for the local group discussions were key to meaningful interaction. Morfeld (2002) strongly recommends "that you pre-determine when and how you will employ questioning techniques"; we therefore synthesised the feedback from the pre-session submissions to design stimulators for local group activities. Local moderators received our plan of activities in advance to optimise the workflow during the session.

Collating feedback from a high number of locations presented another challenge. We solved this by optimising the presentation slides provided by the speaker for SAC delivery. The slides were designed to hold attention, allow live annotation and included interaction prompts. Figure 6 shows an example of a form that location producers at each venue used to enter relevant feedback from their local groups. These forms were only suitable for show-of-hands type of activities however; for more complex types of feedback typed text onto an empty slide in real time.

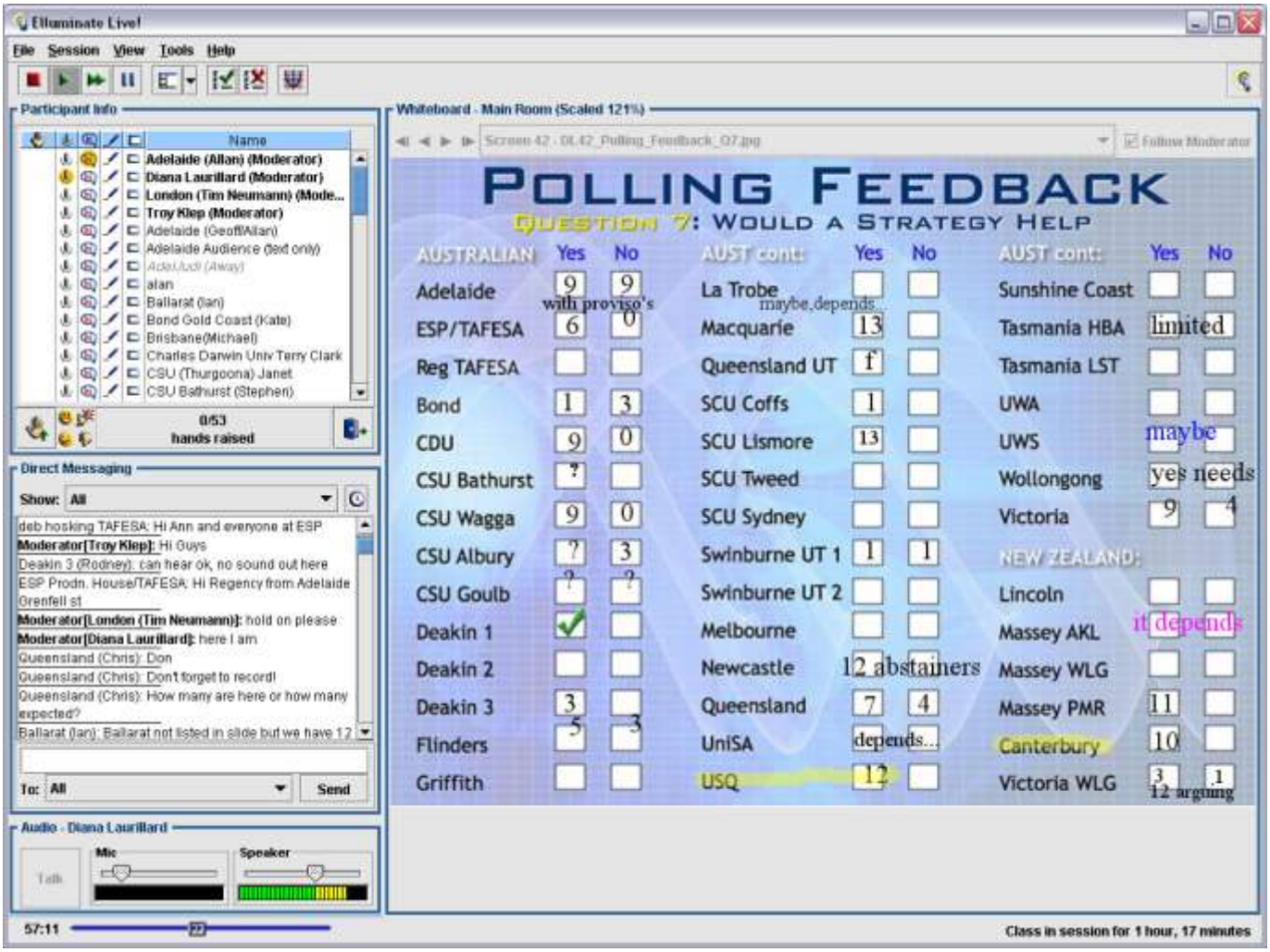

Figure 6: Form to collect live feedback across venues.

Evaluation

Our evaluation was based on a feedback survey, self-reflection and follow-up interviews. The survey results are based on a response rate of 20% (90 respondents). The overwhelming majority was satisfied with Diana Laurillard as a speaker and with the content of the session, although about one fifth of the respondents indicated that the webinar did not increase their understanding of e-learning, nor did they see a direct link to their practice. This may be because of the heterogeneous nature of the participants, ranging from learning and teaching support staff to established lecturers and professors. Generally, participants thought that the session was well organised, and less than five percent would not want to participate in future webinars. An equally low number did not think that webinars could enhance learning or foster professional development. This indicates that SAC is both an attractive and useful platform for teaching and learning, especially as no major technical difficulties were reported.

Pedagogy, in particular encouraging participation, presented specific challenges. Participants generally welcomed the opportunity to meet, discuss and interact with others, and while the interaction level, was high, interaction took mainly place at the local level: less than one fifth felt that they engaged in discussions with other participants via the online environment, and socialising as well as informal exchange happened almost exclusively in the offline realm. The participatory activities did not seem to be overly challenging, yet only a fourth of the respondents thought they were not actively involved.

In terms of role perceptions, the majority of respondents classified themselves as observers or passive listeners. This contradicts the overall perceived level of activity: although the interaction was primarily face-to-face, it was prompted through the online environment. Furthermore, among the perceived roles for the implementation of the webinar, typical education roles such as teacher or instructional designers were rated significantly lower compared to technical or media production roles such as speaker, moderator, producer, operator, or director. This raises the question how people perceive themselves and act in synchronous online environments, how people understand the multi-modal medium, and how face-to-face and online interaction can be combined effectively.

Conclusion

SAC is a powerful technology to blend online and face-to-face learning with large groups in real-time scenarios. However, there is a lack of comprehensive pedagogic models that can directly be applied to MVPs, so educationalists currently need to rely either on practitioner guides, developed to support primarily operational aspects, or they need to synthesise models designed for other purposes and be creative in the adaptation for SAC-based mass collaboration.

This case study demonstrates a successful large-scale educational application of a real-time multi-media collaboration platform. Technical reliability, administration and usability are no longer issues of concern, and our evaluation shows high levels of acceptance of the technology. The main challenges are the design of learning activities that capture the potential of mixed online and face-to-face settings, and the integration of MVPs into larger teaching contexts. Meeting these challenges will require a better understanding of the impact of multi-modal characteristics, which are inherent in SAC environments, on the learning process. Judging from the increasing popularity of real-time media-rich conferencing, we are confident that this mode of learning has a very positive future.

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Session slides and the event recording are available from:
http://www.lkl.ac.uk/research/mosaic/archive/harness_elearning

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