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Case study: Using Cloudworks for an Open Literature Review

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This case study is one of a series exploring the ongoing use and development of the Cloudworks site. This case study will focus on an expert elicitation Cloudscape established to support a literature review project led by the University of Exeter and funded by the Higher Education Academy (HEA): “The positioning of educational technologists in enhancing the student experience” We will look in detail at the way the site was utilised by the project teams and other participants in the review, and evaluate the site’s effectiveness in supporting this piece of research. We will make recommendations for the development of support resources associated with the site and suggest factors that might impact on the success of similar activities.

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1. Context

1.1 Introduction

This case study is one of a series exploring the ongoing use and development of the Cloudworks site. Cloudworks is a social networking site for sharing and discussing learning and teaching ideas. The core objects in the site are 'Clouds' which can be anything to do with learning and teaching (a discussion, a description of a tool or resource, an example of a teaching intervention). Clouds can be grouped into 'Cloudscapes'. The evaluation criteria used are two of the critical success factors for Cloudworks, formulated as part of the JISC OULDI project (see Page 5).

Conole (2009a) identified nine types of Clouds and Cloudscapes; one of these she entitled 'Expert elicitation' – i.e. those Clouds or Cloudscapes where the author is explicitly asking for contribution to an idea, project or question by experts in the field:

"A mechanism for gathering views, references and resources from experts in the field around a particular research topic/issue" Conole (2009)

There are a number of Clouds and Cloudscapes asking for feedback and answers from expert communities. Some of them are informal and spontaneous (such as the 'Using Twitter with students' Cloud <http://cloudworks.ac.uk/index.php/cloud/view/2398>), which emerged from a conversation initiated in Twitter and then transferred to Cloudworks. Others are more formal in nature; explicitly eliciting information from a targeted user group. This case study will focus on an expert elicitation Cloudscape established to support a literature review project led by the University of Exeter and funded by the Higher Education Academy (HEA): *"The positioning of educational technologists in enhancing the student experience"* (<http://cloudworks.ac.uk/index.php/cloudscape/view/1872>).

We will look in detail at the way the site was utilised by both the project teams and other participants in the review, and evaluate the site's effectiveness in supporting this piece of research. The Cloudworks team were involved in supporting and guiding the construction of the Literature Review Cloudscape, which provided the team with an opportunity to trial a range of support interventions, and collect evidence about



what information and guidance may prove useful for researchers wanting to conduct similar research on the site. This case study aims, therefore, to provide an analysis of the use and activity of the site in relation to the Exeter project to inform the future development of the Cloudworks site, and associated support resources and documents. It may also be of interest to other researchers concerned with developing web 2.0 sites or activities with the aim of supporting the development of professional knowledge and practice.

For interest, the final Exeter Literature Review report is available via the EvidenceNet wiki site at: <http://evidencenet.pbworks.com/2009-Synthesis-Projects> and it has also been linked to from its e-Learning page at <http://evidencenet.pbworks.com/e-Learning>.

1.2 Background

The objective of the Exeter study was to:

“identify in the literature the most effective positioning of educational technologists within institutions in order to maximize their positive impact upon the student experience. In particular, it sought to identify any direct relationship between the work of educational technologists and the enhancement of the student experience.” (Browne and Beetham, 2009, p.4).

The Exeter team had originally planned a desk-based literature review, with some online engagement of the educational technologist community to synthesise the literature. However, it was decided that a recently completed review (Shurville et al., 2009) had similar scope, and the focus of the project was modified to promote the project as a *process* that encouraged the HE community as a whole, and educational technology staff in particular, to identify the literature they judged of most value to them.

The methodology chosen by the Exeter team was a variation on the Delphi methodology (Linstone and Turoff, 1975) This methodology commonly uses a panel of experts who are unknown to each other. Questionnaires are used to elicit the opinions of the experts and each expert communicates only with the lead researcher, rather than directly with the other experts. In the first stage of the process a set of



open questions are asked and the results of these are carefully analysed to identify key themes and a more structured questionnaire produced, the results of which are again analysed and the questions refined. Thus, the process leads to a convergence of findings or a consensus. In the case of the Exeter Literature review, the methodology was adapted, using Cloudworks, to promote a divergence of views, and participants were able to communicate with each other. A framework of nine open questions was used to structure the activity:

[Q1: What is the relevance of the student experience to the role of the educational technologist?](#)

[Q2: Where should educational technologists be 'positioned'?](#)

[Q3: Are educational technologists impacting on changing pedagogies?](#)

[Q4: What are the career trajectories and challenges for educational technologists?](#)

[Q5: How do educational technologists gain institutional seniority and influence?](#)

[Q6: What are the different emphases in the roles of educational technologists?](#)

[Q7: To what extent does an educational technologist have to navigate between 'innovative' trends and established practices?](#)

[Q8: What is the relevance of educational technologists in relation to educational strategic missions?](#)

[Q9: Is the role of the educational technologist relevant to the contribution of the University to the wider knowledge economy?](#)

The Exeter Project Lead closely facilitated the process and discussion on Cloudworks. He also regularly summarised the discussions at key points, identifying emerging themes and refocusing discussion.

Contributions were made in response to the questions between 28th August and 13th of November with most activity occurring in the first four weeks. In addition, an independent parallel conversation took place on the ALT-MEMBERS mailing list in response to the advertisement email. This was an unexpected outcome, and cannot



be included in this evaluation report for ethical reasons, but provides a useful opportunity to begin to compare the activity on the Cloudworks site with an alternative and established professional discussion forum and community. The archived discussion is available for ALT members to view at <https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=alt-members>).

1.3 Focus of the case study

It is important to note that the validity and reliability of the Literature Review itself is not in question; the focus of this case study will be firmly framed around factors relating to critical success factors 1 and 4 of the JISC-OULDI project plan. These are:

Critical success factor 1: *A body of evidence sufficient to demonstrate that the Cloudworks website has created real enhancement in the professional knowledge and understanding of participants and increased their sense of belonging to a community of practice.*

Critical success factor 4: *Resources and guidance that are regarded by users as clearly and effectively supporting them in the intended task/ skills/ knowledge acquisition.*

We will explore how far the Cloudworks site has added value to the study, especially in terms of supporting sustained and lively activity, and development of professional knowledge (critical success factor 1). We will further identify which interventions or activity improved levels of focused participation, and which did not. The findings of this study will lead to a series of recommendations about the future development of the site as a whole, and user support resources and materials in particular (critical success factor 4).

This case study will provide a detailed evaluation of the ways in which participants in the Exeter Literature Review interacted with the site and each other. For the purposes of this study these participants will be categorised as follows:

- Exeter project team (which will include Project Lead and Co-author)
- Cloudworks Team (OULDI-JISC Project lead, Cloudworks Developer and OULDI-JISC Project Officer)



- Project associates (which will include members of the wider Open University team and the HEA primary contact)
- Other participants (who were not connected with either project)

1.4 Project perspectives

Recently we have been developing a framework to enable us to systematically position dialogic transactions and patterns of activity, so that we can more reliably evaluate these in relation to a) a developing community, b) the development of professional knowledge and c) sustained participation.

The meaning and use of the term 'community' has tended to shift from location to relationship specific over the past 20 years, in part to account for the notion and increasing prevalence of online or virtual community:

"[Community does not] imply necessarily co-presence, a well-defined identifiable group, or socially visible boundaries. It does imply participation in an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their communities".

(Lave and Wenger, 1991, p. 98)

These relational communities cannot be considered constant or permanent in the way a geographically defined community might be, and so the process of community formation and growth becomes of greater concern. Rheingold's early definition of virtual community has been influential in shaping new definitions:

"virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace"

(Rheingold, 1993, p5)

Wenger (1998) and Brown and Duguid (2001) describe these loosely connected webs as 'networks of practice' and Wittel (2001) 'network sociality' and differentiate them from communities proper. For Wenger, Communities of Practice are cohesive, and



share historical processes developed from strong ties; networks are more fragile and focus on relational interaction. Our position is that ‘community development’ is a *process or lifecycle*, rather than an absolute state. This means that we do not believe it will be possible to say that a new community ‘has developed’ or has not, or that there is value in pursuing this. Our interest is in the process of evolution from loosely tied webs or networks to the more cohesive productive groups that can be seen to emerge from transient but repeated and iterative collaborative activity that happens *within, across and between* groups from more established Communities of Practice:

“ a persistent, sustained [socio-technical] network of individuals who share and develop an overlapping knowledge base, set of beliefs, values, history and experiences focused on a common practice and/ or mutual enterprise”

(Barab, Kling et al., 2003, p.23)

2 Overview of interventions and activity

Early in the project, the Cloudworks team became aware of a tension between the dual objectives of the Exeter project (to generate a list of literature and also to gather opinions, attitudes and experience, related to the theme) and Cloudworks’ functional purpose as a social networking platform to debate and exchange ideas:

“[The project] aims primarily to use Cloudworks as a collaborative tool for inviting the sharing contributions that derive from a critical and intertextual reading of the literature. But there's an underlining research project behind that seeks to survey the opinions, attitudes and experiences of a community of practice, at the same time as, asking people to contribute insights about their professional/disciplinary identity, while being reflexive about this with references to the literature. So all these produce tensions - that although are addressed by Cloudworks' usability/utility successfully - may nonetheless hinder the outcome of the discussion”.

Excerpt from a reflective discussion within the Cloudworks team 28th August 2009

We recognised that it is easier for people to contribute to a discussion that requires them to draw on experience, attitudes and memory, than to a discussion that asks



contributors to make explicit reference to reading and theory, and so requires participants to be willing to do a significant amount of work prior to contribution. We therefore recommended that the questions included 'starter' quotations from the literature so that participants could in the first place respond with reference to these, informally and spontaneously, in answer to the questions - *'how does this relate to your experience?'* *'do you know of any other literature to support this?'* Facilitation of the discussion over time could then draw out further references.

Nine questions were set up as Clouds and these were gathered together to form the Cloudscape. As suggested, each question was supported by a quotation to guide discussion:

"Each question was 'seeded' with a quote taken from a reference listed in Shurville et al. (2009). They were not intended to constrain contributions, nor was there any obligation to agree with the quote! They were merely included to stimulate thoughts on the pertinent literature and to help expand upon the question"

(Browne and Beetham, 2009, p.8)

cloudworks Home Clouds

Q2: Where should educational technologists be 'positioned'?

[→ EDIT](#)

234 views

'...support for TEL is provided by a wide range of units. There is a differentiation of roles within the different support units ranging from technical support to pedagogic support. Of the different types of support units post-92 institutions have larger Education Development Units with greater numbers of academically orientated support staff. Pre-92 institutions appear to provide more support locally suggesting a more devolved provision'. (Browne et al., 2008, p. 7)

Does the literature confirm this view and what diversity is evident?

Improve this cloud: [Add extra content](#) | [Add link](#) | [Add tags](#) | [Add reference](#) | [Add embedded content](#)

Figure 1. Screen shot of question 2 with 'seeding' reference and supporting questions



The support and guidance given by the Cloudworks team focused around minimising the impact of the formal structure and purpose of the literature review on what we hoped would become a lively and collaborative discussion. Our strategy was to make it easier and less consequential for participants to contribute and access references to the literature - the 'add a link' and 'add an academic reference' functions were added to the site for this reason. The team also explored ways in which the language, layout and structure, and facilitation of the Cloudscape could be managed to promote inclusivity and active engagement.

2.1 Language

"It was interesting to note how the discussion developed over time and one contributor commented on the value of occasionally pulling themes together and prompting further discussion...This was intended as a means of promoting a 'Delphi' style summary on areas of convergent thinking. But further analysis would be interesting to try to determine how the questions were asked in the beginning (i.e. tone, focus, formality / informality) and how this may have encouraged or discouraged initial engagement, though it was also noted that either way, such variables became less important as the discussion developed, themes emerged and relationship roles became established."

(Browne and Beetham, 2009, p20)

When Exeter first contacted the Cloudworks team they had already established how they anticipated using the site. They drafted an introductory statement of 847 words which was to form the basis of the Cloudscape introduction to the project. This draft was an edited version of the report introduction and as such, the language was formally constructed. The draft was written in the passive voice rather than first person, which created a distant tone. Only in the section where participation was actively being encouraged were the pronouns 'we' and 'you' used - indeed in one sentence the educational technologists at which the text was aimed were referred to as 'they'. In addition, several sentences were quite long and complex in structure. The following is an example of this - this sentence contains multiple clauses and insufficient punctuation indicators for quick and easy reading:



“Institutions are beginning to grapple with the significant cultural and structural changes necessary to firmly embed technological innovation within mainstream education as part of their overall mission in response to the range of both national and international imperatives.”

The Cloudworks team suggested that the text be shortened, the style simplified and the tone made less formal and more inclusive.

The project lead also received feedback from a close colleague that led him to make changes to the text:

“As Rebecca and Juliette know, following some very insightful feedback from a colleague whose opinions I greatly value, it has proved necessary to make a number of amendments to our Ed tech lit review Cloudscape text.”

From an email to the Cloudworks team 2nd September 2009

The final draft of the introductory text was 40% shorter at 507 words and phrased to be more inclusive, although large portions of the text were still written in the passive voice. The reference to educational technologists as ‘they’ was removed and the community recognised more warmly through greater use of ‘you’.

It was felt at the time by the Cloudworks team that we were only partially successful in offering the correct advice to the Exeter team. The final introduction still seemed too long and the language style formal with an earnest, parental tone that we were not confident would encourage spontaneous participation. It was felt that further exploration into an emerging written style on the site would be useful over time so that more specific and timely advice and guidance about language choices might be given.

2.2 Lay-out and structure

The Cloudscape can be seen at

<http://cloudworks.ac.uk/index.php/cloudscape/view/1872>

A brightly coloured image was recommended by the Cloudworks team to quickly engage attention and one was chosen which, it was hoped, would emphasise the focus on informal collaborative discussion.



Figure 2. Cloudscape picture

As the introduction to the project was still long, requiring over two screens, anchored headings were added at the top of the description to enable easier viewing.

Clouds were titled with their question number first so that they appeared together on the Cloudscape, and in order. Generally, Clouds appear in Cloudscapes in alphabetical order but the Exeter team was keen that they were presented in a particular sequence.

2.3 Promotion and initial engagement

Recommendations about promotion and initial engagement made by the Cloudworks team were informed largely by informal observations of activity on the site. From these, assumptions were made around what kinds of interactions would encourage uptake and sustained discussion:

- *“People seem to prefer to join an active debate rather than to starting it (as long as they do not feel it is ‘old’)*
- *Speculative/ tentative questions elicit greater response than ‘confident’ questions*



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- *The ‘fire’ in a discussion or debate quickly dies down so time limiting is likely to promote discussion rather than limiting it*
- *People need clarity around the purpose of what they are doing”*

from an email from the OULDI-JISC Project Officer to the Exeter Project Lead 21st August 2009

It was suggested by the Cloudworks team that a staged launch would be most likely to be effective, with specific Communities of Practice invited to contribute from the University of Exeter, and subsequently Open University, prior to a wider launch. It was felt that this approach would better ‘funnel’ discussion, controlling focus so that the opening up of the discussion and associated references would develop in a coherent manner. It was hoped that inviting participants who were already engaged in the issues and literature around this subject to contribute early on, would encourage less confident or well informed participants to share their own thoughts and experience. Ultimately, this did not happen in an organised and time-structured way due to last minute revisions to the text so we are not able to evaluate fully the impact this approach might have had.

The Cloudscape was formally launched on 3rd September by the Exeter Project Lead through announcements on a number of JiscMail lists, specifically ALT-MEMBERS HELF and UCISA-SSG, and via emails to specific individuals:



With apologies for cross posting ...

The University of Exeter has obtained funding from the Higher Education Academy to undertake a review of the literature pertaining to:

The positioning of educational technologists in enhancing the student experience

This email is by way of inviting you to share your knowledge of the relevant literature.

We are working very closely with the Open University, using their Cloudworks social networking software as a place where we can all share awareness of, and evaluate the literature to assist HEIs in determining what they really expect from, and how they may choose to develop, their educational technologists. Establishing a better understanding of the contexts within which educational technologists can flourish, should assist institutions in overcoming the barriers to the successful deployment of Technology Enhanced Learning (TEL) as part of the overarching ambition of improving the students' experience.

Please go to: <http://cloudworks.ac.uk/cloudscape/view/1872>, where you will see 9 questions. You are invited to click on a question to contribute a reference and participate in the discussion. In appreciation of your contributions, you will be acknowledged in the final report to the HEA.

In a recent UCISA survey the contribution of TEL was identified as a major driver in enhancing the student experience, permeating all institutional strategies, policies and actions. Indeed, the context now is an environment where institutions are increasingly emphasising the pre-eminence of improving the student experience and where TEL is increasingly being regarded as institutionally relevant.

This invitation to identify relevant literature will run throughout September 2009, and the Report will be available from the end of October 2009. However, it is very much hoped that the conversation will continue to run and be updated over time providing a persistent resource for researchers in this area.

A Tweet was sent on the 7th September by the OULDI-JISC Project Officer:

Positioning of ed techs in enhancing student experience. Read anything interesting on this subject? <http://bit.ly/1bbmnf>

11:28 AM Sep 7th, 2009 from web



And a further JiscMail invite was sent on 29th September by the Exeter Project Lead:

Dear all,

On 3rd Sept I sent an email to this list inviting members to share their knowledge of relevant literature that addresses **The positioning of educational technologists in enhancing the student experience.**

I'd like to thank everyone who has contributed - for your comments and very useful references.

I'm sending this email to you all as an additional prompt to invite you to engage. If you have not already done so, please read the contributions already made, and they may stimulate you to share your own thoughts and references.

My 3rd Sept email has also unwittingly sparked off a very rich and lively sharing of opinions directly to this list. I plan to harvest this as part of the highly contemporary (!) 'grey' literature and will acknowledge all contributors in my Report to the HEA. Interestingly, there has been very little overlap between the contributors to the CloudScape and the alt-members list.

With thanks to you all again, and I look forward to another surge of activity on the Cloudscape at <<http://cloudworks.ac.uk/cloudscape/view/1872>>.

Reminder email sent to individuals and groups by Exeter project lead 29th September 2009

All invitations took respondents directly to the Literature Review Cloudscape page, rather than to specific questions. It was felt that this was necessary for ethical reasons - so that participants could be clear about the nature of the discussion and how their contributions might be used. However, targeting individuals and groups with invitations for specific questions and discussions may be a more effective way of engaging people in discussion, and would allow projects to promote less discussed questions.

In order to take part in discussion on the site it is necessary for people to register with Cloudworks. The process is easy and free but may have put off some potential participants, especially those who felt less engaged with the topic or less confident socially, technologically or in their views. In order to stimulate sustained engagement



and discussion, as a default option participants receive email alerts when other people contribute to a Cloudscape that they follow, or to which they have previously contributed. Participants can also set up an RSS feed, keeping them informed of the ongoing discussion.

2.4 Facilitation and leadership

We have observed that while groups are forming, it seems to be important for someone to take on a social facilitation role. This might include offering guidance, prompting through questions, reassurance, thanks, congratulation, welcome and humour. These observations mirror findings and recommendations that have emerged from research into both Community networks and online learning communities:

“It is this sense of place that is required in online learning communities. Suggested strategies for developing this sense include incorporating human elements such as welcoming messages, and acknowledging members individually (Hill & Raven, 2000; Palloff & Pratt, 1999; Paulsen, 1995). Other suggestions include establishing member profiles, developing a common symbol system (Kim, 2000; Palloff & Pratt, 1999), and including rituals from the lived in world (Kim, 2000; Suler, 2000). The tone that is established in this environment is also a critical factor, and a range of suggestions have been made including using a friendly, open and polite voice, being curious, analytical and informal”

(Brook and Oliver, 2003, p. 139)

“Experienced online communicators may help increase interactivity, especially during the early, start-up phase of a community network. It is also important to recruit and support members who have time available for social interaction.”

(Millen and Patterson, 2002, pp. 312-313)

The project lead agreed to play this facilitative role and participated in discussion for 13 out of the 22 active days. In total, he made 21 comments, which was 38.89% of all comments made. The persona adopted was encouraging and often avuncular in tone:



"I've only just noticed the McPherson and Nunes reference deposited above. Thanks for this..."

"The above discussion is really insightful."

"I was so taken with this reference, I've taken the liberty here to bring it to a wider audience."

"I'd like to encourage you to write this planned paper!"

"And I'd like to thank Fred Garnett for bringing to my attention the reference..."

"Juliette, this is indeed a fascinating area."

Example of supportive comments from Exeter Project Lead on the Cloudscape

"What I tried to do and I remember you commenting on this at the time, from time to time quite regularly, to keep some energy into it ...I tried to provide a summary to stimulate yet further conversation, and I would go back to people and say, oh that's an interesting thought 'Sally',,, have you got a reference that draws upon what you said. Sometimes that just went cold, but by and large people did try and respond to that. So I perhaps had to put the energy into it to say hey can you provide a literature to back up what you're saying?"

Excerpt from telephone interview with Exeter Project Lead

It was hoped that as the discussion developed, others would take on this social role but this did not happen in a sustained way, and this is in retrospect not surprising given the limited time the Cloudscape was active.

2.5 Technical development

The Cloudworks team worked closely with Exeter to provide functionality that would both encourage participation, and provide evidence and data in an appropriate format for the Literature Review report. A number of changes had already been planned in advance of the ALT-C conference the following month - for example, the 'Extra content' section was moved to under the 'Description' to enable participants to add to the descriptive content of the Cloud. The aim of this adjustment was to



provide some clarity around what sort of content should go in this section as opposed to the 'add comment' section. In addition to this, the Exeter team felt that they needed the ability to add academic references away from the discussion (so that they could more easily be lifted out). They requested functionality that allowed [Delicious](#) bookmarks to be embedded in the Cloud and that the reference list could be integrated with a referencing tool such as [Endnote](#). Ultimately, the 'add academic reference' function was added with embedded support about how to reference using the Harvard system, but it was not possible to embed Delicious or integrate with Endnote in the time available. The 'add a link' function was planned but brought forward to meet the needs of this project. This allowed for more spontaneous links to be added to relevant material including blog-posts and reports available online.

3 Evaluation questions

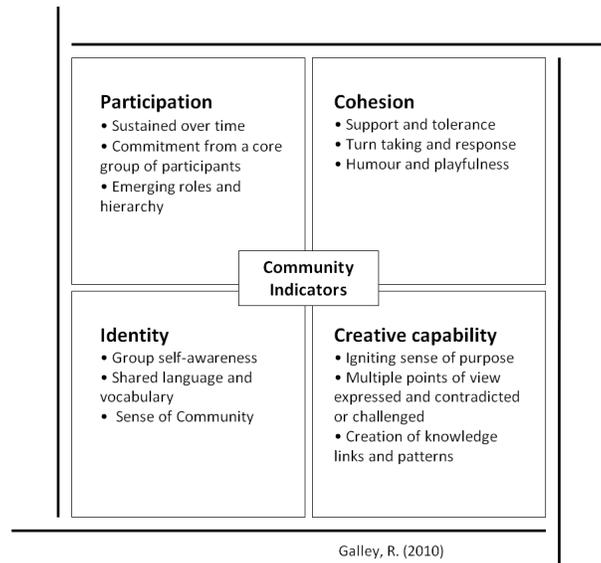
As detailed above this study will focus on issues relating to critical success factors 1 and 4 of the JISC-OULDI project plan

3.1 Critical success factor 1

Has the use of Cloudworks created real enhancement in the professional knowledge and understanding of participants and increased their sense of belonging to a community of practice?

3.1.1 Sense of belonging to a Community of Practice

As part of the wider OULDI project, we have identified a series of factors that we argue indicate the development of new communities on the site (Galley, 2010).



Central to our understanding of how a community might develop on the site, and indeed key to many definitions of community, is the notion that community feeling comes into existence through social and work activity sustained over time. It is therefore important that we examine how far the Cloudscape supports and encourages repeated and sustained interaction:

Commitment from a core group of participants: Was there a core group of participants, who contributed regularly? How far did a core group of participants encourage the engagement and activity of others?

Sustained engagement: How far did participants make repeated contributions? Did they continue to contribute into the wider Cloudworks space?

Clear roles and hierarchy: Did participants take on any special roles over the course of the review? What was the hierarchical structure? Were these effective in promoting and supporting collaborative activity?

We recognise that because this literature review activity was time limited we are unlikely to see evidence of cross-community activity sufficient to lead to the development of new communities in this Literature Review Cloudscape. However, we would expect the Cloudscape to support engagement, sociality and productivity, and promote a 'sense of community' and will therefore use the framework to explore



how far we can see the evidence of activity and transactions, which might contribute to productive engagement, and how well the site supported or promoted these, with a focus on:

Support and tolerance: Were people polite and friendly to others? Was there evidence of a willingness to listen and learn from others? Were less confident participants encouraged to participate further? Can this kind of behaviour be seen to impact on engagement?

Turn taking and response: Did participants take turns in discussions and respond to each others' comments? Did participants ask or answer questions of others?

Shared language and vocabulary: Did participants use similar vocabulary and phraseology? Was a similar tone and style used? Was the style and tone used inclusive or exclusive of other groups?

Sense of purpose: Did visitors to the site understand the purpose of what they were doing? Did they feel drawn to participate and get involved?

3.1.2 Development of professional knowledge

Practice emerging from the use of Web 2.0 technologies and tools suggest a blurring of the boundaries between creative production and consumption (Jenkins, 2006, Bruns, 2008). These processes have opened up new spaces for, and styles of, learning; social spaces that promote 'communities of enquiry', collaborative knowledge building, and shared assets (e.g. interests, goals, content and ideas - see Alexander, 2008 Anderson, 2007; Downes, 2005; Siemens, 2009).

Alevizou et al. (Alevizou, et al., 2010) applies Lévy's theory of Collective Intelligence (1998) to the development of professional knowledge on Web 2.0 space broadly, and Cloudworks specifically:

"For Lévy, collective intelligence can produce a public space that makes possible the representation and dynamic management of knowledge, with the ability to facilitate cognitive transcendence. He uses the social dispersal of meaning as a notion that emerges within and makes possible the evolution of 'cosmopaedia'. Unlike earlier visions of global encyclopaedias or libraries (see Wells, 1938;



Bush, 1945; and also Rayward: 1997), 'cosmopaedia' is highly dialogical and transgressive of its own boundaries. As 'universal' knowledge becomes the sharing between changing individuals (a product of dialogue indeed, "we are the text" he argues in Toward Super-language), there can be no totality/enclosure possible. This ontological shift to the social notion of knowledge emphasises the processual and the expansive, rather than the very idea of 'possession'. This new modality of social production of knowledge enabled by the combination of social software, digital media and peer to peer collaboration offers new opportunities for encapsulating not the universal (global) ideal of enlightenment but the emphasis to the local and the particular relationships mobilised around expansive learning".

(Alevizou, et al., 2010)

We are also beginning to explore the use of Engeström's (2001) framework of expansive learning, as we believe this is particularly powerful for capturing inter-related activity systems surrounding intellectual debates and dialogue of practices in blended events such as workshops, where participants:

- Develop an intellectual basis for criticising existing work practices and taking responsibility for working with others to conceive, and implement where possible, alternatives.
- Develop the capability of resituating existing knowledge and skill in new contexts as well as being able to contribute to the development of new knowledge, new social practices and new intellectual debates.
- Become confident about crossing organisational boundaries or the boundaries between different, and often distributed, communities of practice.
- Connect their knowledge to the knowledge of other specialists, whether in educational institutions, workplaces or the wider community

(adapted from Griffiths and Guile, 2003, p.59)



When evaluating whether this Cloudscape has supported the development of professional knowledge, we will monitor evidence of the following practices:

Crossing organisational/ role boundaries: Were multiple points of view expressed? Did people from different types of roles and workplaces contribute? Did people find participating exciting, interesting and relevant to them?

Creation of knowledge links and patterns: Were links made between concepts and ideas? Did participants attempt to connect their knowledge and experience to that of others?

Create or develop new knowledge and practices: Did participants challenge existing knowledge and practices and work with others to conceive alternatives?

3.2 *Critical success factor 2*

Were resources and guidance regarded by users as clearly and effectively supporting them in the intended task/ skills/ knowledge acquisition?

3.2.1 Resources

The Exeter Project Lead did not attempt to set up the Cloudscape himself, and from the beginning requested significant support from the Cloudworks Team. We were pleased to offer this level of support at this time, as this formalised form of 'expert elicitation' was perceived as a new use of the site and a potentially valuable one. This case study will examine correspondence to discover what questions were asked and what aspects of the site proved difficult for those outside the Cloudworks team to understand or use.

Resources to support users: What resources would support users in setting up a similar Cloudscape independently? What format should these resources be presented in? Who should they be aimed at?

3.2.2 Guidance

Because this case study occurred just one month after the launch of the re-design, the guidance offered was based on initial observations and theoretically based



assumptions. This case study will examine the guidance given and evaluate the accuracy of it.

Clear and effective guidance: Was the guidance given useful and effective? Was it given in a timely way? What parts of the guidance given might be usefully developed into generic resource materials?

4 Evaluation

4.1 Evaluation methodology

The evaluation of Cloudworks' effectiveness in promoting a sense of belonging to a Community of Practice, and in creating an enhancement in the professional knowledge and understanding, will be largely informed by an analysis of activity patterns and transactions. Publically available data is collected from the Cloudscape and associated Clouds, and from Google Analytics.

The effectiveness of the support and guidance offered by the Cloudworks Team is informed by data gathered at the time from emails, minutes of meetings and reflective logs. In addition, a 30-minute telephone interview was conducted with the Exeter Project Lead on his perceptions relating to the evaluation questions.

4.2 Analysis

4.2.1 Patterns of activity

We observed high levels of unique page views to the Cloudscape page¹ - 790 unique page views across the active period 28th August to 13th November 2009, with 180 unique page views on the 3rd September alone following the email invitations. This suggests that the Cloudscape was both well publicised by the Exeter Project Lead, and that links to the page had been circulated more widely by those initially contacted.

¹ The *unique page view report* aggregates page views that are generated by the same user during the same session. A *unique page view* represents the number of sessions during which that page was viewed one or more times.

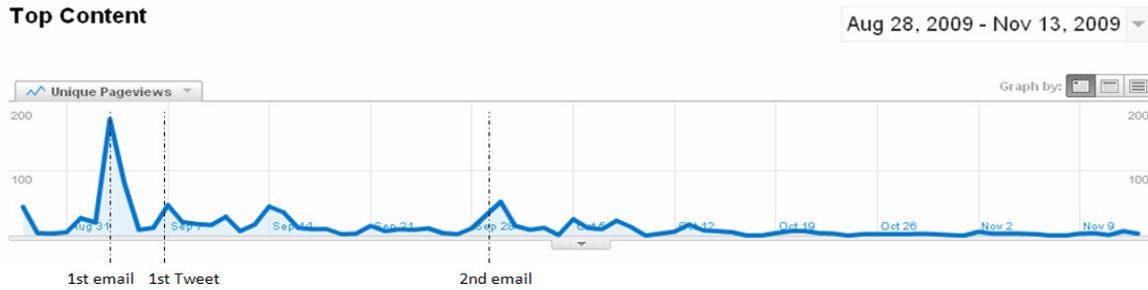


Figure 3 Screen shot of Google Analytics graph of unique page views for the Cloudscape page only 28 Aug -13 Nov 2009

Of the Cloudscape page's 790 unique views, 412 came direct to the Cloudscape, 119 through a Google search and 112 through a Twitter link. The rest (147) came via <http://evidencenet.pbworks.com> and another OULDI project site, <http://compendiumld.open.ac.uk>. There appears to be a significant disparity between the number of Cloudscape page views and the number of views of the question Clouds, with views for Q1 accounting for approximately a quarter of those for the Cloudscape. This suggests that many visitors did not make it past the Cloudscape page to the questions and that the order of information is critical in terms of the level of engagement.

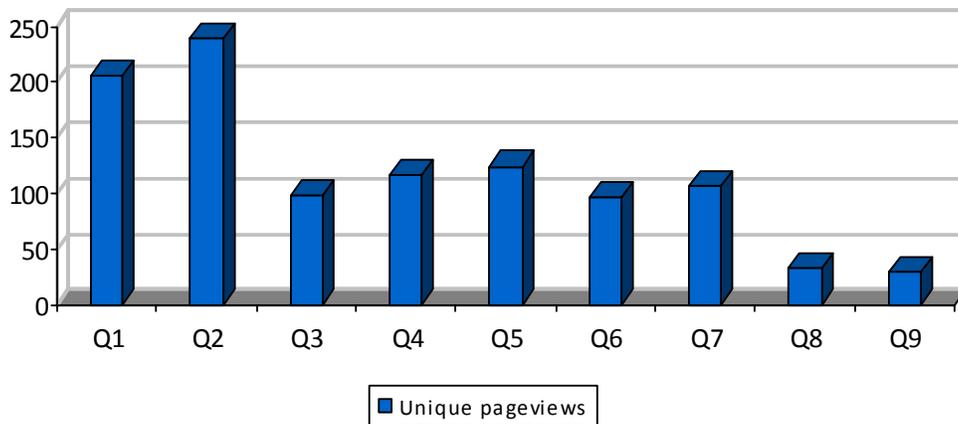


Figure 4 Total number of unique pageviews for each question Cloud

The majority of visitors did not make actual contributions themselves and this is consistent with activity patterns noted on other social networking sites. Marc Smith (1992) suggests that ‘lurkers’ (those that read posts without ever writing one) may be the largest single group within any virtual community. Whereas it is likely that this non-interactive and peripheral activity will still promote the development of professional knowledge and understanding of some, and they may well still feel more a part of a Community of Practice as a result of reading and engaging cognitively with the discussion, the activity of these visitors cannot be observed, and so it will be primarily interactive user behaviours that will be examined for this case study.

In total, there were 19 active participants, 2 (10.5%) of these were from the Exeter project team, 3 (16.8%) from the OULDI-JISC project team, 2 (10.5%) closely associated to one of the projects and 12 (63.2%) not associated in any way with the projects. Of those participants *not* associated with the project, 3 (25%) had been active on Cloudworks prior to the Literature Review and 2 (16.6%) were active afterwards, with only 1 (8.3%) active to the present day, four months afterwards.

The graph below shows the number of ‘events’ (comments, content, links and academic references) for each of the 19 participants.

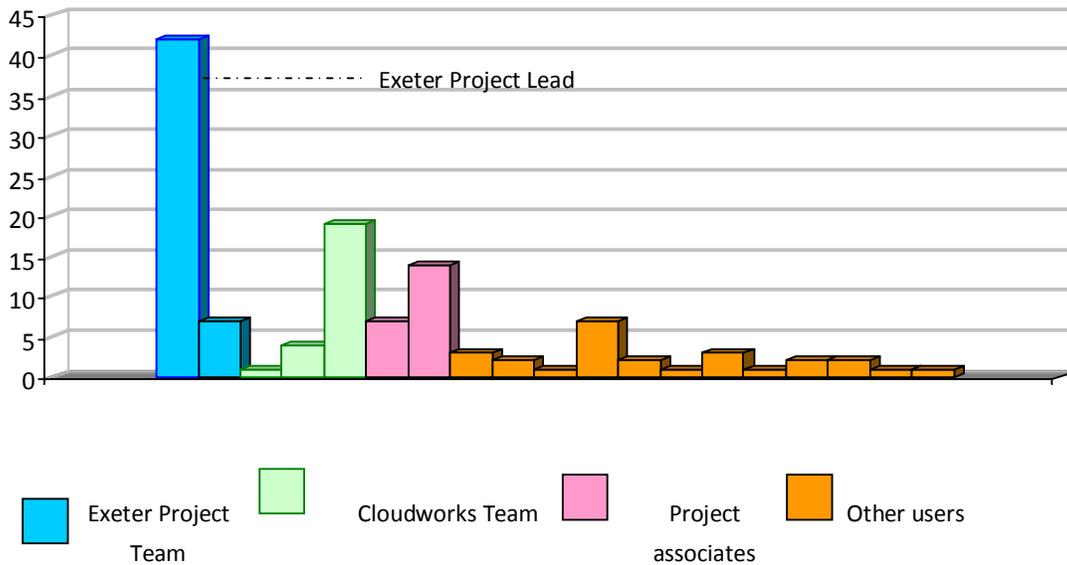


Figure 5 Number of activity events for each of the 19 participants



As can be seen, the numbers of interactions made by this large group of ‘non-associated’ participants was low in comparison with the other groups. On average, participants not connected with the project only added 1.25 comments each compared with an average of 8.14 comments each for participants connected with the projects in some way. Overall, only, 20.84% of comments and extra content, 16.07% of the links added and 20% of the references came from those 63.2% not associated with the projects.

The problem of how to visualise contributions to Clouds has been considered by Cross (2010) in his investigation of spheres of sharing in Cloudworks. His aim is to unpack and examine patterns of engagement and, in order to help support this process, he has developed a representational form that seeks to give an instant overview of which Clouds the subscriber contributed to, what they contributed, how much, the time between contributions, and, importantly, how all this fits in to the wider sequence of contributions to these Clouds by others. Cross argues that visualising patterns should better equip us for interpreting subscriber activity and better understand relationships. The visualisation itself takes the form of a chart (columns represent Clouds and rows periods of activity) with coloured symbols showing what and who contributed. A basic set of symbols are suggested although there is scope for customisation depending on the purpose and detail of visualisation required. The visualisation below has been developed from Cross's work and shows the pattern of activity across the question Clouds for the duration of the project:

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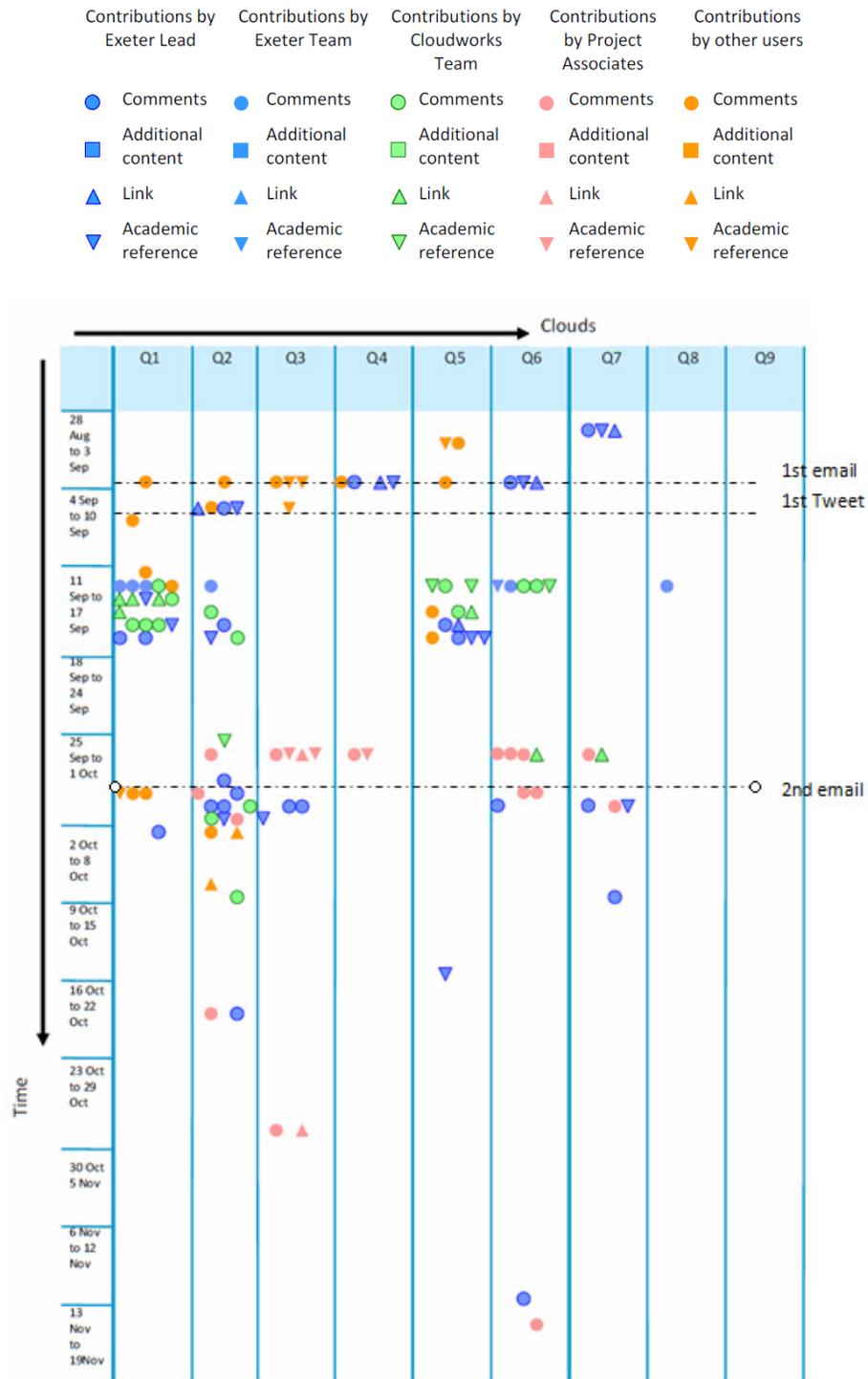


Figure 6 Cloudscape activity distribution across question Clouds for the duration of the project 28th August to 19th November 2009

It can be seen that most activity happened in the first five weeks and in the first few Clouds, with 45% of all activity 'events' (comments, content, links or references) added to the first two Clouds - Q1 and Q2. The promotional emails sent by the project lead can be seen to impact on levels of activity, but the Cloudworks project officer's Tweet seemed to have no significant effect. In addition, those not connected with the project actively participated for a fewer number of days (although they may have visited the Cloudscape more often than this across the duration of the project, this cannot be tracked). Figure 7 below shows the number of days of activity for all 19 participants. 58% of participants contributed for one day only, 79% for less than 3 days and the only participant to contribute for more than five days was the Exeter Project Lead with a total of 13 days of activity.

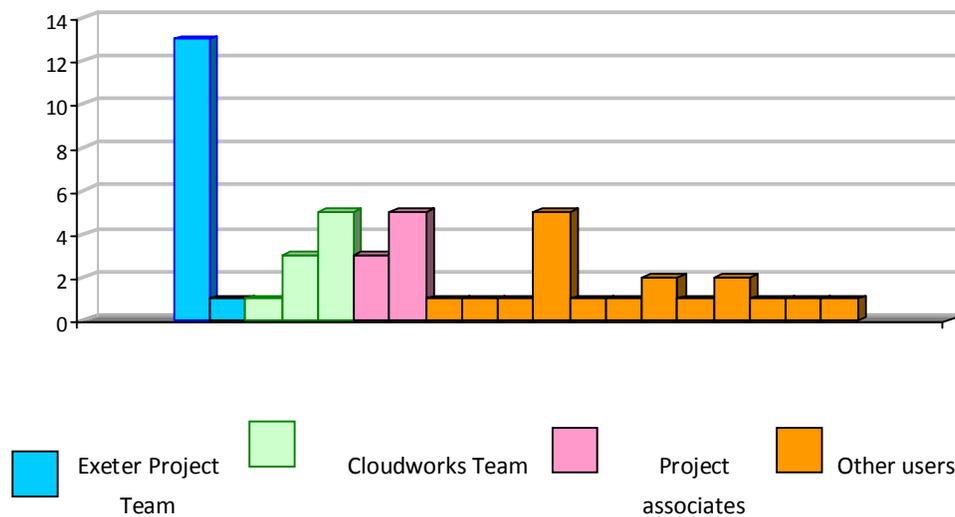


Figure 7 Number of days activity per user

An initial look at the spread of activity suggests that many people showed interest in the site but a significant number did not look in more detail at the questions and were not drawn to participate. Where people did contribute, the majority did so on two separate days or less, and made two or less contributions, unless connected to the project. Only two of this group went on to contribute to the wider Cloudworks space. There was a very active core of contributors who were associated with either the Exeter project or the Cloudworks team, but none of the 'non-associates' became core contributors as might be expected. This suggests that engagement was not

sufficient to sustain discussion over time, and whereas this is not such an issue for the Exeter project who were pleased with the breadth of contribution, it is of significant interest for the Cloudworks Team. A analysis of the discussion might indicate reasons for this.

4.2.2 Analysis of interactions

This analysis will focus on the contributions to Question 1, Question 3 and Question 5. Each of these Clouds contain contributions by those associated with the team and other users. Of these Question 1 is most successful in terms of contributions and Q3 the least.

Question 1

There were 9 contributors to this Cloud: 2 from the Exeter Team, 2 from the Cloudworks Team and 5 other participants.

Number of comments/ extra content	17 (3 by Exeter Lead, 3 by the wider Exeter team, 5 by members of the Cloudworks Team and 6 by non-associates)
Links	4 (all by Cloudworks Team)
References	3 (2 by Exeter Lead and 1 by non-associate)
Unique page views	206

The seeding reference and question were as follows:

Q1: What is the relevance of the student experience to the role of the educational technologist? [→ FOLLOW](#) [→ EDIT](#)

'Although it's true that some of the drive to go "on-line" has come from above through academic development plans and university strategies, one of the main drivers for the development of online learning has been the student body. One of the greatest levers we've found has been student demand'. (Education for Change, 2004, p.3)

Is there any literature that substantiates this view?



Two key themes ran through the discussion, the first about whether the student experience/ demand should be of prime importance, or pedagogic effectiveness (and latterly whether the educational technologists role was to act as a broker between the two). The second theme was about whether student feedback relating to the educational technologists role was available, and whether there was felt to be a problematic distance, or 'disconnect' between students and educational technologists.

Participants appeared to come from a variety of institutions and roles, and expressed multiple points of view as might be expected. There was a level of disagreement about how central students should be in informing the use of technologies and yet the tone of all participants was polite and interested. Generally, language was adjusted to become thoughtful and tentative in tone. Most made reference to other people's points of view, and made links between these and their own experience or knowledge:

"I think there may be a distinction..."

"I would agree with H., I think there is a gap here..."

"The answer to the question, I would suggest..."

"Your comments A. made me think about..."

"Yes, I think this is a real issue. In my own experience..."

"yes good point..."

One participant, whose tone was generally more formal than the others, referred to participants as an explicit and expert group:

"I'm sure most people here will be familiar with that work..."

Participants used similar vocabulary and phraseology associated with the Educational Technologist role, and comment was made when one introduced a new term:

""paraprofessionals" - thanks I just learned another great word :)"

"Could Helen's 'paraprofessional' (a new concept for me too) be viewed as a new assertive attempt at 'positioning'?"

The discussion was well balanced with a mixture of contributions from project teams and other participants throughout.

Question 3

There were 4 contributors to this Cloud: 1 from the Exeter Team, 1 a project associate and 2 other participants.

Number of comments/ extra content	5 (2 by Exeter Lead, 2 by a project associate and 1 by a non-associate)
Links	1 (from a project associate)
References	6 (1 by Exeter Lead, 2 from a project associate, 3 from non-associates)
Unique page views	98

The seeding reference and question were as follows:

Q3: Are educational technologists impacting on changing pedagogies? [→ FOLLOW](#) [→ EDIT](#)

'...while part of the framework for flexible delivery may be borrowed from economics, there are progressive interpretations of flexible learning which are structured around competing social and humanist values which have educational expression through concepts such as constructivism, open education, student-centred learning, life-long learning, deep learning, and accessible learning structures'. Nunan (1996, online)

Is there any literature that now substantiates or repudiates this now quite old quote?

The discussion keeps to the question and centres on the pedagogic models emerging from the wider use of technological tools and approaches. However, much of the discussion could also be said to be relevant to the discussion around Question 1, which may indicate that the number of questions may have had an impact in



defusing discussion and collaboration. The Exeter Project Lead identified this as an issue in the telephone interview held after the event with the Cloudworks project officer:

“very often I found conversations took place wherever they took place, and when I was writing up the report I, in fact wrote it up doing a narrative of where the discussion had taken place, which wasn’t always where I thought it would most naturally take place...undoubtedly the questions we saw as the core ones were at the beginning, and then it sort of got a bit sub divided further on ... I think on reflection, we didn’t need to do that.”

Excerpt from telephone interview with Exeter Project Lead

The tone of this discussion is in fact much more focused around the literature than in the Question 1 Cloud, but is less interactive in that only the Exeter Project Lead makes reference to the comments and ideas of others; the other comments tend to be structured as a list and stand alone. One contributor added a reference but did not participate in the discussion.

The tone of the participants remained inclusive, friendly and fairly informal:

"Thank you for starting this cloudscape and lit review"

"But I don't know how visible this is in literature - you'd have to review the literature itself, and comment on it, to make it visible..."

"I've only just noticed the McPherson and Nunes reference deposited above. Thanks for this..."

One participant does begin a potentially interesting conversation about the pedagogic preferences of educational technologists, however it is not taken up by others. This Cloud received less than half the views of the Question 1 Cloud and this is likely to have had an impact on levels of engagement. It is unclear why this question did not attract as many views as neighbouring questions.

Question 5

There were 4 contributors to this Cloud: 1 from the Exeter Team, 1 from the Cloudworks team, and 2 other participants.

Number of comments/ extra content	8 (2 by Exeter Lead, 2 from Cloudworks team member, 4 by non-associates)
Links	2 (1 from Exeter Lead, 1 from Cloudworks team member)
References	5 (3 from Exeter Lead, 2 from Cloudworks team member)
Unique page views	186

The seeding reference and question were as follows:

Q5: How do educational technologists gain institutional seniority and influence? [→ FOLLOW](#) [→ EDIT](#)

'...it is frequently stated that the UK e-university did not have any acknowledged e-learning experts amongst its senior management and that, therefore, policy discussions had to begin at a lower level than an experienced team would expect'. Keegan et al., 2007, p.72)

Does the literature identify any issues around the placement of educational technologists within HEIs' power structures?

The discussion was started with someone reporting on and linking to her own PhD research, which sat very much within the remit of the question. Later another contributor mentioned another piece of PhD research and a conference was discussed off topic. The Exeter Lead brought the subject back but with not much success as the conference was discussed further. Although the discussion was not on topic, the discussion about conferences and associated theoretical frameworks was interesting to the community.



4.2.3 Telephone Interview

The telephone interview was conducted by the Cloudworks Project Officer with the Exeter Team Lead 3 months after the Cloudworks event to give time for reflection. The interview focused around three key themes and lasted half an hour. The following is a summary of the discussion around the key themes.

How well do you think the nature of Cloudworks could be said to have added value to your project?

On choosing Cloudworks:

"[Choosing Cloudworks] was entirely serendipity... I wanted some medium where I could have a conversation with the world of community, by and large or the community out there in some way. And I'm not in any sense claiming that I've surveyed the field to see what options there were, but Cloudworks was very prominent in my consciousness, and I thought well lets try it. I think it was as sort of simple as that really."

On the impact of openness on discussion and participation:

"I'm genuinely not aware of anybody saying... "I really want to get this off my chest, but I'm not going to say it there"... Open means open, and therefore conduct yourself accordingly. And I think, that imposes a discipline, but I think it's a very reasonable discipline. I'm not a great one for people sounding off in certain contexts hoping that other people can't hear. So whether it constrained other people I don't know. I mean I am who I am so, it didn't constrain me."

"And also as you may recall... I'd advertised this on a number of mailing lists, but ALT-MEMBERS was the only one that generated traffic. People just responded to my invitation to go into the Cloudworks literature review just by chit chatting on the mailing list. And there was this entirely separate and parallel thread of chit chat, which I found was fascinating... were people letting off steam? I think a lot more. Much more a closed discussion talking to a like-minded community of friends...that sort of tone didn't come through the Cloudscape one at all. So maybe going back to your question of closed or open,



perhaps yeah, I'd never thought of that before. Perhaps people's tone did take account of the environment in which they were talking".

On how successful Cloudworks was in supporting the project:

"Was Cloudworks better than other things? And I can't answer that question, because I didn't try other things. But as far as, how effective was Cloudworks, or how effective was this environment in which these vibrant conversations could take place, I would say that it proved to be very effective. Extremely effective".

How useful was the support and guidance you received? What additional support and guidance do you think should be available to others doing something similar?

On the support received from Cloudworks Project Officer and Lead developer and the co-creative approach adopted:

"Now because I was very engaged with you and Juliette... because I was a very raw recruit, I think I was able to guide you and you were very sensitive to what I was saying, as to how it would be understood by people coming fresh to the software. So again... what was presented to people coming into the site was very clear and unambiguous, because I think it was, it was jointly produced by, by you and colleagues who were immersed in it, and me asking all the dumb naïve questions which you responded to, so I think that worked very well."

"...as I was learning, because I was entirely new to Cloudworks when I was doing this, so I had a lot of elementary, naïve questions. And there's nothing in it for me to say this but the reality is that both of you were immensely responsive so, and I think by the time we thought we'll get this going, we were up against the clock a little bit. And the turnaround of answer, question, answer, question, answer, was very rapid. And in addition to that, some new capabilities, because I think there were, Cloudworks is always evolving to people's needs, Juliette put some capabilities in there that weren't in there at the time... So in that sense of you responding to what a punter was looking for, then the response was very good".



On advice and guidance that others may need:

"I found confusion with the Cloud, Cloudscapes, Cloud this Cloud the other...I understand where its all coming from and its very nice, its very clever, but it doesn't really map on to where most people are at most of the time, and you have to get inside that insider language....If you're immersed in it, then its second nature. If you're going to dip in for one or two purposes when you're trying to suck people into something. They're not going to engage with that language, and I found I had to translate it, to perhaps more common or garden language. Which perhaps is disappointing, and I can understand exactly what Cloudworks... Cloudscape... Cloudworks - I'm having trouble now - Cloudworks is trying to do, but I had to often translate the Cloudworks sort of, the semantic view of itself to another language, to get people into what I wanted them to do...when I happened to be in Auckland in New Zealand last December, and I went to a pre-conference workshop that Grainne was doing with some folk from Wollongong, it had all the context of learning design. But we had a very, we had about half an hour, or more of going through those sort of questions that you said what is a Cloud, what is a Cloudscape, and we did it very slowly and very gently in a very measured way, and that was a focus exclusively on, lets understand Cloudworks before we then try and do anything meaningful with it. And that I think was very very useful. But then I think the challenge to you is, is someone going to spend half an hour learning how to use something before they use it? What most people say with web tools, they're either intuitive or they're not...And I think the challenge of Cloudworks is how does it stand up against others in terms of intuitivity, if that's a word, it is an incredibly rich resource and I know Grainne on her road show has sort of said a lot of thought's gone into the design, and in a sense it encapsulates lots of capabilities which perhaps exist as standalone capabilities in other contexts. But what Cloudworks has done is bought them all together in one family and I think that's a really really strong selling point. But for someone coming at it new I think they do trip over the terminology.



How far do you think we were successful in engaging a variety of different sorts of people in the activity?

“Well, when I started off... I had this idea from someone else. It may well have been you... to try and feed the discussion before it went properly live. So I sent off an email to about 10 friends as I thought at the time, who would duly oblige, and put something in, and I was a little bit disappointed that I think maybe a couple did. Some of the ones that I thought were absolute bankers didn't, I've been back to them since and asked them why. But it's just time and commitment... I was a bit disappointed, but we did get something. So that when it went live people could see, ooh there's something already going on”.

“... it was interesting that those that contributed the ALT list, put nothing into the Cloudspace at all - a completely different community. And it wasn't – ultimately - it wasn't a very large number of people. I can't claim that we had a cast of thousands contributing to this, so, but it did draw in people, some of whom I really didn't know at all, that they weren't contacts of mine in any particular way. And it also drew in a couple of people from abroad as well. However they managed to find it. So I would say it was quite a select group of people”

“The variables always are what time of year it happens, how it impacts upon people's lives at that time, and the answer to that is individual to those people. And ...what's in it for them. I've had a couple of people, who subsequently became aware of it after we'd sort of finished it, who said “oh, we're just about to do reorganisation of Ed Tech's in our place, could I please have a copy of the conversation”. So some people became alert to what it was all about later. They hadn't engaged with it earlier, because it just wasn't something that was sort of high on their priorities. So I don't know, unless you offer incredible inducements I think, I don't think the problem with this is any different to the problem of trying to get a, urm, a snap shot conversation for anything to be honest.”

5 Conclusions and recommendations

5.1 *Sense of belonging to a Community*

The group of people most closely associated with the project, and particularly the Exeter and Cloudworks Project Leads, played an important role in encouraging and supporting engagement. They used their knowledge of the subject and status to guide discussions and reassure new participants. Clearly it would not be sustainable over time for these individuals to continue to play this role in such an intensive way but it appeared to work well for the duration of the activity. It was interesting to see that the HEA main contact became quite engaged in the discussion nearly a month after the launch of the Cloudscape and continued to contribute occasionally for another 4 weeks. This activity might indicate the emergence of a new social facilitator but the duration of the activity was too short to be certain.

Participants were consistently polite and friendly to each other. The Exeter Project Lead noted a difference in the language and tone between the Cloudscape discussion and closed ALT mailing list discussion, with the Cloudworks discussion being more focused around the literature and reserved in tone. This is likely to have been a consequence of the open nature of Cloudworks, and more work would need to be done to evidence whether the open, informal and polite discussion that can be seen on the site, promotes collaboration and knowledge creation between groups, or whether the more subjective, familiar discussions of closed spaces provide a stronger basis for productive collaboration. The language and vocabulary participants used were inclusive in that uncommon terms were explained.

Often comments were statements of opinion rather than discursive in nature, but as discussions developed it could be seen that they were starting to become more social and enquiring in tone. It is felt that the rather formal nature of the questions encouraged this pattern, in that it was difficult to respond to the formal question immediately in a more informal and discursive style, and that a couple of interactions were required to move away from that tone in a socially acceptable way and fulfil the purpose of the discussion which was to share personal experience and ideas (albeit linked to the literature).



5.2 Development of knowledge and understanding

It can clearly be seen from the activity patterns that participants tended to say what they wanted to say in response to the first two broadly phrased questions, rather than find the 'correct' Cloud lower down the list. The Exeter Project Lead also noted this. The number of Clouds could have usefully been reduced to avoid distribution of a discussion across a number of Clouds. As themes started to develop these could then have been added as new Clouds if appropriate.

Although some participants linked their comments to the comments of others at a superficial level, there was little evidence that links were made between concepts and ideas in such a way as to begin to develop new understandings. This may be due to a number of reasons and it can be speculated that this may be due to the short duration of the activity, the distributed nature of the discussions over several Clouds or the rather polite and tentative nature of the discussion. Engeström (2001) argues that conflict and disagreement are important factors inherent in opportunities that promote Expansive Learning. Future guidance will suggest that questions are phrased in such a way as to seek provoke argument between different points of view. Another type of Cloudscape identified by Conole (2009) as 'Flash Debates' provide some interesting examples of how provocative questions can stimulate energetic and productive discussion.

As suggested by the Exeter Lead in the telephone interview, there was evidence that people from a variety of different settings contributed to the discussion, although the rate of contributions from those not associated with the project was disappointing. Generally, these participants made one comment only although they may have continued to engage with the discussion without contributing further. Future guidance for those seeking to set up a participatory literature review will suggest that the tension between the structure and purpose of the literature review, and the social, spontaneous affordances of the web 2.0 functionality of Cloudworks, is reduced through clearer statements about the primary purpose of the review. For example if the primary purpose of the review is to identify key themes in the literature, then questions should ask for contributions on that basis, whereas if what is sought are key themes in the experience of a group of practitioners then questions elicit this type of experiential discussion. It is felt that there was too much asked of

participants in this review in that participants were asked for their experience as practitioners and also examples of how these experiences have been dealt with by the literature, and the primary purpose was left unclear.

5.3 Guidance and support

The Exeter Project Lead found the support and guidance of the Cloudworks team to be of a very good standard. He was happy that his questions had been answered quickly and usefully. It would not be possible for all those setting up such reviews to receive such tailored support and so support materials will be developed to help guide these types of activity in future. The following suggestions will be made based on findings from the evaluation of this review:

- That the language and tone used in the Cloudscape introduction mirrors the type of language and tone wanted in the discussion. So for example if a reflective and discursive discussion is to be encouraged then the tone of the introduction should be reflective and discursive. In addition, questions should encourage different points of view, and may benefit from being controversial or challenging in tone.
- The purpose or 'vision' of the discussion and anticipated outputs should be clearly stated both in the Cloudscape introduction and in each Cloud. In addition links to ethics statements should be added at the top of each Cloud. This would make it possible to target Clouds to particular groups of people and 'market' the discussions more effectively. The number of Clouds should be kept to just one or two initially, and additional Clouds added and linked to as key themes emerge.
- The recruitment of 'champions' to begin discussions and encourage initial discussion is essential. These champions will bring with them their own communities of practice, experience and understandings. In addition because they will be clearly briefed about the nature of the project they will also be able to model the types of interactions that would be appropriate. This role is especially important at the beginning of the project, until new participants take on the role spontaneously.



- We would suggest that the full functionality of Cloudworks is used to support these discussions: video, pictures, slideshows, academic references, links, discussion, Twitter streams etc. This both provides a stimulating environment for people to work together but also improves the visibility of the discussions on other social networking sites and search engines.

5.4 A review of the barriers and enablers

It can be seen from this evaluation that Cloudworks was largely successful in supporting this project however participation was not as widespread or lively as might have been hoped. The use of Cloudworks as a tool for gathering knowledge and experience of a wide and experienced group of practitioners has been established over the last 18 months. The open nature of the tool makes it especially effective for discussing issues relating to learning and teaching across and between the usual role, institutional and sector boundaries. In addition, it allows for the aggregation and archiving of objects and discussion over time, contributing a great deal to the collective intelligence of the wider education and research community.

However, facilitating these type of cross-boundary discussions can be complex and the level of personal and technical skill required to do this should not be underestimated. Guidance can be given to encourage the types of activities and interventions that we are beginning to see impact on levels of engagement and interactivity, however ensuring that this guidance is appropriately differentiated or individualised is a significant challenge.

It was clear from the evaluation of this review that a significant majority of people viewed the Cloudscape but only contributed once, or not at all. Although this is in line with the experience of other social networking sites, and others have argued the value of 'legitimate peripheral participation' (Lave and Wenger, 1991) the conversion of these participants from observers to collaborators is important for the sustainability of emerging discussions, communities and the site as whole. Our approach will be to provide functionality that draws people from passive, through to active participation: from reading, to favouriting or recommending, to adding links and references, to discussion, collaboration and finally instigating collaboration. We are aware that the use of web 2.0 tools is not for everyone, or indeed for every



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activity but believe that such tools have an enormous amount to offer practitioners in the development of their practice, and the sector as a whole.



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