University of Leicester

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Perspectives on the nature of communities and their needs - conceptualising and researching potential wiki use at UoL

Roger Dence and Richard Mobbs
University of Leicester, UK

1   Introduction

The potential of informal repositories, such as wikis, to support a diverse range of tasks in higher education is now well documented. However, in evolutionary terms, practical applications are still at an early stage of the innovation-diffusion process, even though wikis have been in existence for more than a decade.

Much attention to date among higher education institutions has focused on the practical realisation of the technical possibilities and solutions, in what might be characterised as technology-based 'push' approaches. On the other hand, the nurturing and supporting of users and user communities is a vital task in encouraging user-based 'pull' approaches, to encourage the knowledge generation and construction that is a necesssary prerequisite for knowledge sharing and exchange through the use of such technologies.

From both of these perspectives, a key organisational challenge has been how to develop both the capacity and the capability necessary to explore the potential of wiki-type technologies, and thus to realise the possibilities foreseen that range in scope across teaching, learning, research and administration needs and in scale from the individual to the institutional level.

This Working Paper outlines some informal conceptualisations about the nature of communities that have assisted the development, deployment and embedding of wiki technology at the University of Leicester (UoL). It also provides summary points from initial research on user perceptions and potential barriers to introduction and use, and considers the needs and uses of different types of communities and how these might relate to the infrastructure provided.

2   Conceptualising the Nature of Communities

The notion of a 'community' is now used widely in considering contemporary issues in many areas of management practice, including those in academia. The interests of different discipline groups, of formal research partnerships and informal collaborations, and of diverse internal and external constituencies can all be informed and understood by the idea of a community.

This concept thus provides a useful 'lens' through which to examine, for example, the nature of stakeholder interests around a particular issue; or how such relationships develop, manifest or exert themselves, and the potential implications thereof; or how knowledge is generated by and then shared between stakeholders in formal or informal processes.

Much of the current discourse about the nature of communities is derived from, or at least informed by, the work of Etienne Wenger (1998, 2000) and the now dominant concept of the 'community of practice'. Defining the nature of such practice-based communities, Wenger *et al* (2002) proposed that these are: "…. groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis".

Within this construct, the idea of individuals being members of several, or indeed many, communities simultaneously is perhaps self evident, given any individual practitioner's wide range of interests, involvements and engagements, and coupled with the temporal and dynamic aspects influencing such factors at any one time and over time. This is what some writers have described as participating in nested and overlapping communities.

A later publication (Wenger, 2003) highlighted the knowledge characteristics of communities of practice, with the information and tacit aspects of a community's work. Here the role of a 'shared repertoire of communal resources' is indicated as providing 'a set of tools for enabling future practice', and Wenger suggested that both *information* and *tacit* dimensions are involved that, in effect, do different but related jobs of work.

He also suggested that in close-knit communities: "… the tacit dimension can become highly aligned as practitioners … share a similar way of interpreting and responding to information signals". Thus, the importance of emotional, social and cultural factors in considering the nature of communities becomes a more significant issue once the organisational context for technology deployment comes into consideration.

As Wenger observed in his earlier work (1998) in linking communities and technologies from a knowledge perspective: "The challenge is to negotiate between different communities who will have different conceptions of 'the problem', varying agendas, and ways of thinking and talking about work".

However, in addressing the opportunities and the challenges presented by new technologies, the singular notion of a 'community' also can be seen as overly simplistic and to overlook the complexities inherent in many of the situations where it is employed. Arguably the key word in the widely-used term 'community of practice', and the one that is perhaps of most relevance in an academic or professional context, is that of practice. That is, to be relevant and effective, a community of practice has to be so in practice, the practice itself being the *raison d'être* both for and of the community.

In developing 'wiki-thinking' at UoL, the concept of communities has been interpreted in an open and flexible way. The nature of such communities can be represented as a '5Cs' hierarchy, each element having its own defining parameters and key features (Table 1 overleaf).

Nature of Space	Parameters	Key Features
Community of Self	Private, individual	Meeting own interests or needs
Community of Interest	Social, collective	Personal or professional interest or use Possibly transient needs Possibly shifting memberships/constituencies
Community of Practice	Affinity to a professional or discipline area	Possessing a necessitated belonging Reality is based in practice Can transcend organisational boundaries
Community of Need	Team/group; cohort/class	Focus on a purpose Bound in time and/or scope
Community of Many	Public	Open reading Possible open posting/comment/editing

Table 1. Characterising multiple communities.
Source: Dence and Mobbs, 2006

In this conceptualisation, the various types of community can be represented as multiple, affiliated, overlapping and changing domains, each with different defining characteristics:

a) **Community of Self** – this is seen as a private and individual space, meeting one's own interests, needs and use, whether for personal or professional reasons (for example, as an informal repository for digital resources, collecting portfolio evidence or developing outline materials 'offline' from a daily routine or collegiate activity);

b) **Community of Interest** – a social and collective space, whether for personal or professional interest or use, and possibly meeting transient needs with shifting memberships and constituencies;

c) **Community of Practice** – a space based on a professional or discipline membership or affiliation, having a 'necessitated belonging' (or perhaps even a mandated 'necessary belonging') and a reality based in practice that can transcend organisational boundaries and possibly take precedence over institutional or organisational loyalties and values through some form of higher power or authority (for example, professional registration and a licence to practice having legal force);

d) **Community of Need** – a purposive and collective space, for example based on the needs of a team/group or a cohort/class, probably related to some specific task or role (whether self imposed or directed through involvement) and possibly bound in time and/or scope; and

e) **Community of Many** – a public space that offers open publishing and reading of contributions, with any posting, commenting or editing permissions determined either by the technology itself or by the discretion of the site owner or manager and dependant upon the purpose of the space.

Given the multiple and overlapping nature of these communities, the issue of their relationships with one another requires further review when considering how social software developments can support community formation and adhesion.

Rather than as a hierarchy, as outlined in Table 1, the '5Cs' also can be represented diagrammatically in the form of a pentagon (Figure 2 overleaf). In this conceptualisation, each individual community can be connected with each of the other communities to provide a model of interpersonal and inter-community communication, with the attendant flows of information and knowledge.
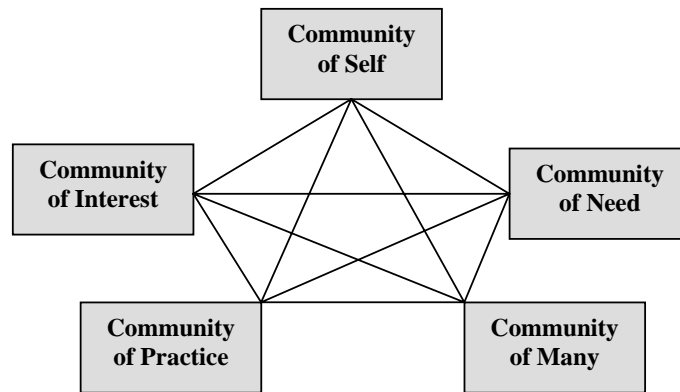
Figure 1. A model of interconnected communities.
Source: Dence and Mobbs, 2006

It is acknowledged that the '5Cs' categorisations described above do have their own in-built limitations, derived in part from how they have been conceptualised, and with other alternative and/or more finely characterised views of communities being possible. As expressed by Davis *et al* (1993), "… in selecting any representation we are in the very same act unavoidably making a set of decisions about how and what to see in the world".

However, examining the concept of a community through this wider perspective can help to identify different stakeholder groups and their particular interests, needs and potential applications as prospective technology users. These perspectives have been reflected in the infrastructure developed and in the user facilities provided, as outlined in Section 5.

4   Investigating User Perceptions and Potential Barriers to Use

The preliminary research to support the development of the institutional capability and capacity for wiki-type technologies at UoL was undertaken in parallel with the programme of technology development and deployment.

The research programme included:

a)   an initial focus group held in December 2005 with central academics from five departments involved with course development and delivery (two x campus delivery and three x distance learning delivery); together with

b)   a subsequent small-scale email survey in the period from May to July 2006 with 17 central and associate academic personnel engaged in a variety of teaching roles.

The broad question addressed by the two research strands was:

"In what ways could wiki and wiki-type environments be useful and useable … to support professional development and practice within academic teaching and research communities of practice?".

This question, together with the supporting focus group discussion guide and survey questionnaire, was adapted slightly to take account of the institutional context from that used for the JISC-funded, OU-led PROWE project in which UoL was a partner (see end notes). Both research strands highlighted a number of contextual issues and enabling factors and potential barriers in the introduction of wiki-type technologies, which are summarised below.

4.1   **Focus Group Research**

The initial focus group discussion highlighted:

a)   the existence of diverse approaches in how individuals organise their personal resources, influenced both by experience and practice preferences and by the features and limits of the currently-available technology;

b)   the problem of limited awareness of the nature and potential of new and emerging technology; and

c)   that social and cultural factors relating to context and use are as potentially significant as the technological aspects of the products being considered for adoption.

Analysis of the focus group discussion identified eight main generic issues, with further analysis providing indicative examples of these issues, as outlined in Tables 2 and 3 below.

• Current uses of technology • Current access modes and purpose • Potential uses of technology • Educational values involved	• Concerns of/in using the technology • Elements for success • Needs for future development • Policies to support use

Table 2. Generic issues regarding wiki-type technology adoption.
Source: UoL focus group research, December 2005.

Generic Issues	**Examples**
Current uses of technology	• Informal, ad hoc use for communication • Management of resources • Course-related student-student and tutor-student interactions • Provision of course material • Supporting teaching administration • Electronic submission of assignments
Current access modes and purpose	• Anywhere, anytime access • Ability to upload (as well as read implied) • Authorisation issues (access/use) • Capacity limits (storage)
Potential uses of technology	• Supporting and sharing among associate tutors/external markers • Student group work/online collaborative writing • Sharing and collaboration between central and associate staff
Educational values involved	• Reflections • Private spaces (individual and group) • Allowing publishing
Concerns of/in using the technology	• Fatigue/overload • Behavioural factors (flaming, lurking, intrusion, inertia)
Elements for success	• Simple interface/ease of access • Developing requisite motivations • Taking control • Community social purposes • Topicality/relevance • Keeping materials up to date
Needs for future development	• Relevance to associate tutors and students • Motivation/reward models • Thinking more about roles and tasks • Integration with other systems eg Blackboard • Meeting needs arising from cultural differences • Resource sharing (rather than resource available)
Policies to support use	• Endorsement of needs and approaches

Table 3. Indicative examples of potential adoption issues for wiki-type technologies.
Source: UoL focus group research, December 2005.

Beyond the features of the technology itself, these generic issues can be seen as representing a range of enabling factors that need to be addressed to facilitate the successful adoption of new technologies, but can also, *in extremis*, be seen as potential restraining factors, and thus barriers to adoption, if not addressed to a sufficient degree. These points are illustrated further by the comments from two focus group participants, highlighting socio-cultural and technology issues respectively:

> *"There is little sharing at the moment. Staff may do something on an ad hoc basis between close associates."*

> *"With uncertain objectives and benefits, a light touch is needed. A simple interface is a vital necessity, otherwise barriers will be created."*

From the focus group research, the main barriers to adoption perceived can be summarised as:

a)   individual perceptions (real or false) of the time commitment involved in learning and using new technologies;

b)   the presence of ingrained habits and established practices that could inhibit the sharing or enhancing of resources using new social technologies;

c)   the currency and relevance, and thus utility, of repository resources contributed by others;

d)   policy and operational pressures, for example, the funding of new initiatives and changed/changing workloads; and

e)   the time and effort involved, the perceived rewards and the individual cost-benefit judgments that would be made.

4.2   **Survey Research**

The subsequent survey covered a wider sample of 17 respondents from various departments. These included five associate tutoring staff; nine involved with distance-learning delivery; and 10 involved as participants in an in-house academic practice staff development course. Two were members of university-affiliated higher/further education institutions.

Preparatory work for the survey in identifying a potential sample highlighted the issue of the low penetration of central email accounts among the associate/affiliate population. This would present a limiting factor in accessing any central systems and particularly those requiring the web authoring privileges needed for using centrally-provided wiki/blog technologies. It also constrained the original purpose of the research and resulted in a widening of the intended audience in order to identify a range of issues influencing new technology adoption.

However, the responses obtained highlighted broadly similar concerns to the earlier focus group discussion, as well as raising other contextual issues.

While all respondents had access to broadband connections at work and/or at home, few declared their use of other technologies, only three respondents citing the use of Skype and of I-Pod, PDA and palmtop mobile devices. One respondent qualified their response on this issue with a cryptic 'not for teaching' comment.

This stance might suggest that, notwithstanding probable widespread ownership, personal electronic devices such as mobile phones and digital cameras generally may not be seen as having professional applications. A possible parallel here is with those students who, with extensive technology assets and skills at their disposal, often may see these items as being primarily for leisure and entertainment purposes, rather than for learning.

With regard to the organisation of digital resources used in teaching, most respondents cited conservative and established practices, such as the use of hard drive (c + z drives) directory folders organised by course presentation, movement of material to other destinations by email attachments or uploading/storage/downloading into/in/from Blackboard.

Experience and understanding of learning repositories was limited to mentions of Blackboard and server based systems for storing course readings and lecture notes. There was no evidence of the use of newer forms of web-based storage or repositories by which materials could be shared and exchanged in a more open way.

The transfer of digital resources across different teaching contexts -- for example, between UoL and other academic institutions -- was absent from the sample surveyed, despite other institutional memberships and affiliations being present.

On the reuse of teaching materials for themselves, respondents were more active. Many cited practices such as saving teaching materials on Blackboard for use in the next course presentation, the retrieval and updating or ' topping and tailing' of lecture and presentation materials prior to the next course delivery. However, in the context of the potential for using new technologies and of changing work practices, one respondent commented:

"..... I don't see what's wrong with just storing them on my PC in an amendable format".

In terms of current practices in sharing ideas and resources with others, many respondents highlighted interactions with their students as their primary focus and concern. While almost half of the respondents also mentioned teaching colleagues, only three indicated any substantive interaction with colleagues in a community sense with one commenting simply:

"I share a core class together with two other lecturers. So we share a textbook and write exam papers together.".

Methods for such sharing tended to be using well-established practices, such as hard copies or via a Blackboard site, email attachments or even telephone calls. The problems of not all recipients being able to open emailed attachments in a particular format was cited as a difficulty by one respondent and the fact that everyone has their own preferences for presentation and delivery techniques and styles (eg overhead transparencies, slide presentations, Blackboard postings) by another.

In terms of an ideal solution to the problems of reusing and sharing teaching materials, the problems of incompatible machines and software versions were highlighted and also the need for the department to take a leading role in initiating, defining and facilitating any changes. Two respondents had particularly well-developed views on this aspect commenting:

"A single content format and a single platform would be nice."

"Repository, with powerful intelligent search facility, where I go and ask, and it gives me all available stuff, instead of asking colleagues in person or email and waiting for their stuff to find it is not what I want.".

The materials respondents would most like to share with colleagues within a community context included: worked examples and exercises, lecture/presentation materials, assessment papers, project ideas, new research papers and publications, policy statements and guidelines, useful web links, visual materials (photographs, tables, diagrams), and materials relevant for professional development in teaching and learning.

On the issue of other community members being able to edit respondents' work and to contribute to collective writing, there were mixed responses with eight respondents expressing a definite disinterest or a marked cautionary note in their replies. One respondent highlighted the need for steps to be taken 'to prevent misappropriation', clearly signalling an intellectual property aspect to the issue of sharing resources. And another highlighted their liking for a 'personal touch' to be part of how they presented and used 'their materials' that might inhibit sharing motivations.

With regard to the types of files that respondents would like to see uploaded, most of the commonly-used office-application formats were mentioned by one person or another, including: *.doc, *.ppt, *.pdf files. One science teacher noted that Word is 'hated' as it was perceived not deal with equations well; another noted the need to be able to post program files with source and binary code.

On the question of having access to a wiki or a blog for teaching community use, important considerations for respondents would include:

a)   ease of access;

b)   ability to update people on recent academic and research activities;

c)   be useful in specific areas in sharing content-related subject matter; and

d)   providing discussions on learning aids, teaching materials, ideas etc.

One respondent, commenting specifically on this potential for developing a teaching community using the newer technologies to foster innovation and change observed that:

> *"..... (should) be quick and easy to use. To be different from looking at lecture notes, more informal and allow free thought and mad ideas to circulate and hence to stimulate discussion and new ideas.".*

Expectations of what should be contained in any community policy, guidelines, codes and ground rules for using a wiki/blog included:

a)   similar to email, ie no libel, no offence, respect for others' submissions etc;

b)   a common understanding of copyright/intellectual property issues;

c)   adherence to best academic practice, proper referencing, no misappropriation (use without consent); and

d)   responsibility and relevance, ie adding reasonable relevant 'stuff'.

For these respondents, the most important aspects of interacting with others in communities of professional practice were in: (a) learning (from) each others' experience in dealing with teaching and research matters, with an aim to save time and effort; (b) the sharing of ideas and supporting one another, to advance teaching and learning; and (c) gaining new, diverse insights, experience, comments.

In a distance-teaching context, the breaking down of the distance barrier was also highlighted. As one distance-learning associate tutor commented about the sharing of ideas within a teaching community:

> *"Discussing (with colleagues) methods of interaction with students (is the most important thing). I see myself as a facilitator, rather than a creator of resources. I add value from my non-academic working life experiences and from showing practical application of techniques and concepts.".*

In terms of accessing any wiki/blog environment, responses varied in their understanding from 'quickly' (!), to 'the same way as Blackboard through a web page and the same username and password', and also highlighting the need for both on and off campus access.

In summarising views about the utility and potential value of a wiki/blog-based community, one respondent expressed their aims for what they would like to see discussed within a teaching and research community in terms of:

> *"How to improve the learning experience for students at both undergraduate and postgraduate levels; finding ways to increase the attendance levels of undergraduate students; the advantages and disadvantages of using the internet for academic essays and how to make students more aware of research ethics. How to know the research interests of other academics in the faculty in order to find ways for possible research collaboration and collective writing.".*

4.3   **Research Summary**

In summary, the broad enabling factors derived from both the focus group and survey research at UoL included:

a)   the technology employed needs to be intuitive, instinctive in its use;

b)   there must be clear benefits to be gained in meeting needs and interests and in the opportunity costs of the time in learning new technologies and in use;

c)   any materials contributed to any repository must be relevant to users, and meeting specific needs and opportunities; and

d)   in the context of a highly decentralised institution, it is difficult to mandate technology use and so early encouragement is needed through identifying potential advocates and champions.

Particular development and implementation challenges were foreseen in the following areas:

a)   encouraging the routine sharing of resources for altruistic reasons and social ideals, especially in areas with low levels of community formation and adhesion;

b)   acknowledging the context of successful communities as being self forming, self managing and self sustaining, especially in the light of the widespread paradigm of 'communities of practice' within higher education; and

c)   facilitating professional and personal development in all areas, covering pedagogy as well as subject and discipline.

Arguably, the specifics of an academic context aside, many of these issues are common to most new technologies and can be seen as being in accord with the earlier work of various authors on groupware adoption. For example, Grudin (1994) commented on the challenges in involved groupware design and adoption, highlighting *inter alia*: providing unobtrusive access; potential disparities in the work involved and benefits gained; the problems of developing a critical mass of users; the disruption of social processes by new technology; difficulties in evaluating benefits; and the need for careful handling of the adoption process.

Or, as a commentator at a JISC Digital Repositories meeting commented in October 2005, for wikis or wiki-type environments to be successful, they must:

> *"… make it easy to do what is difficult at the moment, and to do what people like doing or what works well for them."*

5   Considering Needs and Uses

As noted in the introduction to this Working Paper, the potential for the use of social software technologies, such as wikis and blogs, in higher education is extensive, ranging 'in scope across teaching, learning, research and administration needs and in scale from the individual to the institutional level' (p1).

A number of authors have identified particular educational uses, such as those outlined in Table 4 below derived from the work of the Collaborative Software Lab and inspired by both constructivist and socio-constructivist perspectives:

- Information sources
- Assignment submission
- Collaborative writing (collective knowledge construction/generation)
- Problem solving
- Project team spaces
- Anchored collaboration (discussion spaces)
- Discussion fora
- Case and example libraries
- Interdisciplinary projects
- Community building (staff/students)
- Learning to collaborate

Table 4. Educational uses of wikis.
Source: adapted from http://tecfa.unige.ch/guides/tie/html/wikis/wikis-2.html, accessed 25th May 2007.

At UoL, wiki initiatives have been taken forward within the broader context of the university's overall computing infrastructure and the learning technology and e-learning strategies in place with their planned evolutionary pathways. This is contrasted with possible multiple standalone or 'novel' applications approaches within individual discipline or interest areas, although for historical reasons or for particular applications several such standalone environments do exist and will continue to do so.

As noted, the infrastructure development has taken place in parallel with ongoing research into user needs and the utility and potential of wiki/blog applications, in a co-evolutionary approach. The context is that of diverse UoL communities within a highly devolved higher education institution and rooted in some 800 academic, administrative and support staff possessing web authoring privileges (and with the longer-term possibility of over 20 000 such users, including members of student communities).

The need, therefore, has been to address evolving multi-user needs at different levels in both structural and application/use terms. Important guiding principles in systems development have been the provision of a high degree of flexibility in deployment, devolving responsibilities to the user level to the greatest extent possible, and also the potential for eventual integration with other technology and information resources.

The structure adopted is based around an open source approach with applications for building content management systems, intranets, portals and custom applications. The main system, based on the Plone open source content management system, has been in use since late 2005 and its devolved management features have allowed UoL to offer scalable Web 2.0 services from the level of an individual user up to the university-wide community.

The resultant environment is outlined in conceptual terms in Table 5 below, with the scaling in the levels of use from individual to institutional mapped against the categorisations of the communities model outlined in Section 2 (see Table 1 and Figure 1), together with some of the indicative uses and applications that have been anticipated.

Nature of Space > / Features > / Focus of Use ∨	Community of Self Private, individual	Community of Interest Social, collective	Community of Practice Affiliation to professional or discipline area	Community of Need Team/group, Cohort/class	Community of Many Public
Institution (public, open)				Event/group repository	Public information Reputation building Transparency
Institution (internal, closed)		Cross-discipline interests Issues development		Event/group repository	
Department		Thematic/group repository Shared interests	Current awareness Peer networks Co-authoring	Co-learning Course work Peer review or assessment	
Project			Interest coalition Co-authoring / co-writing Emergent issues or practices Problem solving	Partner collaboration Research projects Co-learning Peer review or assessment	Dissemination
Individual	Personal repository Useful resources Reuse / reversion	Common interests Affinity groups Shared resources	Discussion Experimentation Develop ideas		Public profile

Table 5. A matrix of user levels, needs and indicative uses.
Source: Dence and Mobbs, 2006

This conceptual structure provides for a suite of potential wiki/blog repository environments for use as repositories and collaborative working spaces at individual, project, departmental and institutional levels by different constituencies within the university (and, subject to release level and access permissions, externally as well).

It provides a scalable and flexible resource that gives site owners a considerable degree of control over the granting of access privileges and permissions to write, read and edit postings. The conceptualisation of the 5x5 matrix helps to consider the issues involved at each level of use and those involved for each type of application.

6   **Conclusions**

This Working Paper has reported on the UoL approach to developing wiki-type initiatives, focusing particularly on conceptualisations made about the diverse nature of communities and their needs, together with a summary of early potential use and user research.

In developing the institutional capacity and capability for wiki/blog technologies at UoL -- what has been termed its 'wiki-bility' -- initiatives have been launched in a number of different application, discipline and departmental areas in a process of active experimentation. The operational wiki/blog capabilities went live in mid-2006 and while developments are currently still seen as being in the 'innovators' and 'early adopters' stages of the evolution cycle, the trend is clearly moving towards the 'early majority' stage.

The potential for the use of formal and informal repositories, such as those provided by wiki/blog technologies, in many areas of teaching, learning, research and administration is evident. Arguably, the challenge is how best to explore further and facilitate the potential of such new developments while managing a broad range of diverse individual and institutional, as well as technological, issues.

Two underlying questions concerning the use and adoption of new technologies, that are inextricably linked one with another, are:

a)   To what extent are new technology 'push' applications being considered for adoption that might be seen as 'solutions in search of problems', but without necessarily researching and fully understanding or acknowledging users' needs?

b)   What and where are the countervailing 'pull' factors for unmet or unrealised requirements that new technologies might make feasible but that have not been possible hitherto?

The approach adopted at UoL has helped to promote: (a) growing interest in experimenting with wiki/blog environments; (b) an increasing number of active users; and (c) the integration of wiki/blog usage into an increasing number of institutional activities and systems. It is anticipated that the multi-level and multi-faceted approach adopted will enable 'critical mass' to be established among regular users and visitors, thus ensuring the sustainability of the various individual early-use projects and applications.

At the time of writing in June 2007, initial evaluation is being undertaken to provide a view of early use, practice and opinion and an initial benchmark reference. This will inform future institutional developments in the wider social software arena, as well as to better inform evolving best practice in respect of different applications, especially in the teaching and learning areas. Mechanisms for ongoing monitoring of system use are also being put in place.

At UoL, wiki/blog capabilities have now been introduced into the Blackboard VLE to support course delivery and teaching and learning activities in a 20 000-strong user community. Further stages of development will focus on the embedding of such facilities in professional and study practice and on the wider integration of these technologies into and with other systems.

Notes

This Working Paper outlines some of the initial conceptualisations about online communities that have informed the development of wiki and blog capabilities in the University of Leicester's Plone Content Management System during 2005 and 2006 (Dence and Mobbs, 2006), together with preliminary research undertaken on user perspectives.

The research process has also drawn on work in the JISC-funded, OU-led project *PROWE – Personal Repositories Online Wiki Environment* from June 2005 to May 2007, in which UoL has been a research partner (see: www.prowe.ac.uk).

This Working Paper also includes material first presented as a short paper contribution to the *OnlineEduca 2006* conference (Dence, 2006).

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Acknowledgments

Authors

Mr Roger Dence is an e-Learning Research Associate with the Beyond Distance Research Alliance at the University of Leicester. Tel: 0116 252 3423. Email: rdd13@le.ac.uk

Dr Richard Mobbs is Head of Web Design and e-Learning in IT Services with the Computing Centre at the University of Leicester. Tel: 0116 252 2247. Email: richard.mobbs@le.ac.uk