

**Mike Malloch:**

6 Menai View Terrace,  
Bangor, Gwynedd,  
United Kingdom  
LL57 2HF

**T** +44/0 1248 360254

**F** +44/0 870 755 9849

**email:**

[mike@theknownet.com](mailto:mike@theknownet.com)

AIM (iChat):

[mike\\_malloch@mac.com](aim:chat.mike_malloch@mac.com)

JABBER (google-talk):

[m.malloch@gmail.com](jabber:chat.m.malloch@gmail.com)

**weblogs:**

elearning2.0 :

[knownet.com/writing/elearning2.0](http://knownet.com/writing/elearning2.0)

KNotations (technical):

[knownet.com/Members/mmalloch/blog](http://knownet.com/Members/mmalloch/blog)

LinkLog:

[knownet.com/writing/elearning2.0/linklog](http://knownet.com/writing/elearning2.0/linklog)

**bookmarks:**

[del.icio.us/mike\\_malloch](http://del.icio.us/mike_malloch)

[connotea.org/user/MikeMalloch](http://connotea.org/user/MikeMalloch)

**images/slides:**

[flickr.com/photos/mike\\_malloch](http://flickr.com/photos/mike_malloch)

**identity-commons:**

[public.2idi.com/=Mike.Malloch](http://public.2idi.com/=Mike.Malloch)

## Patterns in the clouds: Some thoughts on not being completely wrong about PLEs

To kick things off, let me admit that I *have* been completely wrong about some previous “xLx”s. When “virtual learning environments” and “learning objects” began to be spoken of in the 90’s, I was one of the original dupes. Back then, I would tell anyone who would listen that these objects and environments, powered as they were by Standards™, were going to make cheap online learning possible, even ubiquitous. The web was great, and everyone saw its potential for learners, but creating good learning experiences online was hard and labour-intensive. To address that obstacle, software & standards architects had seen a way to *augment the infrastructure*.

Augmenting the infrastructure was what I assumed it was all about. When people spoke about ‘learning environments’, I took it as read that we were talking about smart middleware that added value to content and supported rich interactions across users and applications. It seemed obvious that by ‘learning objects’ people meant clever little programmatic objects that bundled content with code and knew how to hook up with each other in those smart environments. Begging, of course, the little question of engineering the actual software, but I assumed that (a) everyone knew about that little matter, and (b) the hard work would get done - what with big institutions on board, and big standards to help them work together for a common good.

I was completely wrong. That 90’s jargon in effect meant something like... ‘learning environment’: *institutional intranet, but with some ‘spaces’ named after a university’s administrative concepts*; ‘learning object’: *a web page, but in a folder with the word “course” in its name*. I’m not saying that nothing good has been accomplished by researchers, developers and practitioners of online learning - just that the hard *infrastructure work* implied by the 90’s jargon got sidestepped in the rush to market.

Evocative notions like ‘Personal Learning Environment’ can mean radically different *kinds* of thing to people in different fields of work. So, nowadays, when I get excited about how some great common good can come from sharing out some tricky work, I assume that we’d better belabour the nature of that work before we get carried away with how good everything is going to be when we have the product. Work first, then hype.

So here I go, belabouring it. But first let me make it clear that I *am* very excited about the potential of “PLEs” in the sense of “leverage web2.0 for learners”. In fact, I spend much of my working life organising and coding for experiments which try to deliver great features to real world users by combining, proxying and integrating the “small, loose” standards, simple services and social software entities of web2.0. (We here at KnowNet have built KNotes - a GPL’d collaborative weblogging system for Zope and Plone - which makes a very useful platform for such experimenting - pardon the plug :o) Some caveats, do’s & don’ts follow:

**Position Paper,  
CETIS PLE Experts’ Meeting  
Manchester, June 6 2006**

**Mike Malloch**

## **Avoid reification by repetition**

If we talk about “PLEs” for long enough, people will begin to assume they exist - and that there is a particular kind of artifact which “is a” PLE. This could encourage funders and vendors to concentrate on visible omnibus products - to the neglect of much needed work on other aspects of the services, systems, clients, interfaces, applications and best-practices which could comprise an environment worth describing as ‘PL’.

## **The ‘E’ is out there**

Many punters will mistakenly assume that the ‘environment’ will be metaphorically instantiated in some kind of desktop application program or web interface, but we all know better: a large part of the work required to make ‘PL’ happen will be in adding new services, service layers and bits of bridging code.

## **Practical experiments to reveal real-world use-cases**

Our ignorance of pertinent use-cases is almost complete. The best way to shake out the issues and use-cases is to undertake some serious experimentation - try to use existing services and tools to accomplish small-scale aims with real users, and document the issues, patterns and gaps. Ideally, these experiments should have access to specialist development help, so that ad-hoc features and behaviours can be added or tweaked to meet the emerging cases.

I’ve done some experimenting with real users, and can attest that it is subtle and tricky in the extreme to mix and mash existing services and applications for ordinary groups of users. To my mind, small-scale collaborations among educators and developers, imaginatively pushing the limits of what can be done with existing equipment, are the most pressing immediate issue for all of us.

## **Creativity, connection and expression - not just consumption and aggregation**

There is much work to be done to enable ordinary end-users to create their own content-in-context; to add connection and commentary to what they ‘pull in’. The connectedness of content in web2.0 offers huge scope for exploring new ways for learners to create interesting structurings and representations of their own, but that will require determined experimentation, research and development

## **Respect the web2.0 way**

In any work on PLEs, let’s be very careful to learn from the simplicity, clarity, user-centricity, restraint and attention to detail that characterise web2.0. The good systems-effects only emerge when usage becomes rich and plentiful - and that depends on an ecology in which the individual parts are simple, focused and easy to get along with, and in which the interoperability architecture makes very lightweight demands on its citizens. Small pieces, loosely joined. Small APIs. Small steps. And remember to make it shiny :o)

## **Understand the gaps in web2.0 as it is**

There are some wonderful applications, services and mash-ups out there, but existing services and applications are not quite enough to support the features we can envisage learners having access to in a PLE. Only by determined experimentation can we begin to characterise and address the gaps. (By the way, I have some hunches about where a few key gaps are to be found, but have had no chance to document them yet).

## **Concentrate on the parts web2.0 doesn't reach**

My feeling is that we should concentrate our limited efforts on implementing functionalities and services which are not already available elsewhere ( or which practice has shown are unsuitable in the forms currently available).

## **Tools and platforms to experiment with**

One crucial development task is to provide experimenters with platforms which can be flexibly and rapidly adapted to cases as they emerge. For instance, I am not sure that we need an omnibus desktop application in itself, but I am certain that we need to be able to rapidly experiment with desktop clients for new or adapted APIs/services (structured blogging and microformats through atom-publishing or weblogging API clients for instance, or structured-commentary on items read within an aggregator). Our own KNotes - which I mentioned above - is a useful platform for playing with the serverside of such experimental interactions.

## **Practice, practice, practice...**

In case I did not emphasise my feelings about this enough above: web2.0 is a loose set of practices as much as it is a system... 1) Practical experiments are a key immediate task; (2) practice "in anger" with the web2.0 services and social software systems is to be heartily recommended to anyone who hasn't yet done so; (3) much of what will make the 'E' in PLE will be distillations and encodings of good practice, and much of our jobs will be to solicit, support, generalise and empower such practices.

## **The communication challenge**

This stuff is subtle. What seems obvious to us is unknown to most policy-makers - indeed it's little-known or misunderstood by most professional ed-tech developers. In my experience, people do not "get" the new opportunities until they have made fairly serious use of some of them. Spreading the meme to funders and educators will require vivid demonstrators and small real-world success stories to exemplify the potential we see represented in those pretty omni-graffle clouds :O)

Position Paper,  
CETIS PLE Experts' Meeting  
Manchester, June 6 2006

Mike Malloch