

Discussion paper: EnquiryBlogger – Using widgets to support awareness and reflection in a PLE setting

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Keywords: affect, blogs, enquiry, learning dispositions, learning power, reflection, widgets

Tweet: EnquiryBlogger adds widgets and dashboards to an open source blogging platform in order to support learners' awareness and reflection.

Abstract

Blogs provide environments within which people can articulate, refine and reflect on practice. These characteristics make them useful for learners who are developing the practical skills and learning dispositions associated with authentic enquiry. The EnquiryBlogger tool is being developed to extend the core features of a robust, open source blogging platform in order to support awareness and reflection for enquiry-based learners. The first phase of the project developed blog plug-ins, together with associated teacher dashboards, and piloted their use. Feedback and use data show that the tools support reflection and are valued by learners. The pilot study has informed the development of a second phase of the project, which will support customization of these tools and increase learners' opportunities to develop awareness of the experiences of others.

Introduction

Blogs are frequently updated personalised websites, consisting of short posts with commentary and links (Mortensen & Walker, 2002). They are often employed as 21st-century online incarnations of the personal journal and the research journal. Unlike their paper equivalents, blogs are not only personal records, but are also sites for collaboration and for the construction of social networks. They offer authors and readers the potential to move beyond the expression of a purely informative, individual view towards deliberation, participation in debate and the development of shared understanding.

In the context of education, blogs offer learners opportunities to incorporate many perspectives, to develop carefully crafted contributions, to reflect and to make considered responses to others (Ferguson, Clough, & Hosein, 2007). The medium provides an environment in which learners can observe, articulate and refine practices (Efimova, Fiedler, Verwijs, & Boyd, 2004). At the same time, by making use of the comment facility, they are able to share thoughts, ideas and opinions (Du & Wagner, 2005). In order for students to engage effectively with this emerging genre, they need to be able to experiment and take ownership of their writing, learning to develop a blog as a space for personal learning, reflection and interaction (Burgess, 2006).

These affordances of blogs are relevant to students engaged in learner-driven enquiries, which require the use and development of a set of interconnected thinking and learning skills. Researchers at the University of Bristol identified these skills and dynamics while

developing a theoretically and empirically grounded approach to learning through personalised, authentic enquiry (Deakin Crick, 2009). This approach starts from a topic of interest to the learner, and progresses through to assessment. Eight dynamics in this process, loosely sequenced, are shown in Table 1, with associated thinking and learning capabilities shown on the right.

Table 1: Skills and dynamics associated with learner-driven enquiry

Dynamics of a learner-driven enquiry	Thinking and learning skills
1. Personal Choice: concrete place/object	Choosing/deciding
2. Observation – description	Observing/describing
3. Generating questions	Wondering/interrogating
4. Uncovering Narratives	Discovering/storying
5. Mapping	Navigating/mapping
6. Connecting with existing knowledge	Spanning/connecting
7. Interface with curriculum requirements	Interacting/incorporating
8. Assessment – validation	Reconciling/validating

A second element of authentic enquiry-based learning is the opportunity to develop the seven dispositions that together make up ‘learning power’: changing and learning, creativity, critical curiosity, learning relationships, meaning making, resilience and strategic awareness (Deakin Crick, 2007). The development of these dispositions can be supported through mentored conversations around a self-assessment that learners carry out with the help of the Effective Lifelong Learning Inventory (ELLI). This self-assessment provides them with an ‘ELLI profile’, which provides a basis for reflection and future development (Deakin Crick, Broadfoot, & Claxton, 2004).

EnquiryBlogger has been developed in order to help learners to develop their awareness on the dynamics involved in their enquiry process and to support reflection about the need for and development of related thinking and learning dispositions.

EnquiryBlogger

In order to do this, the first phase of *EnquiryBlogger* extended the core features of the open source blogging platform, Wordpress, in the following ways.

- **Enquiry Spiral** A Wordpress plug-in that can be added to the side panel of a blog. Learners use a pre-defined set of tags to indicate when they consider that a blog posting maps to one or more of the eight enquiry dynamics identified in Table 1. The widget provides a graphical representation of the enquiry, and clickable links allow

learners and teachers to search within and across blogs to retrieve examples of, for instance, 'questioning'

- **ELLI Spider** This plug-in functions in a similar way to the Enquiry Spiral. Learners use a pre-defined set of tags to reflect self-perceptions of their own learning power. The resulting spider diagram provides a searchable graphic representation
- **Mood graph** This plug-in reflects users' affective response to their enquiries. Learners can choose one of five emoticons to reflect their emotional state, ranging from ☺ to :-D. Once they choose an emoticon, they are required to provide a written explanation of their choice, which is recorded as a blog post. The resulting clickable graph charts changes in emotional state over time
- **Teacher dashboards** Class teachers have access to a clickable dashboard overview of the EnquiryBlogger widgets of all pupils in their class. They can see at a glance how each enquiry is progressing, which learners are having difficulties and which learners are reporting success and high levels of reflection

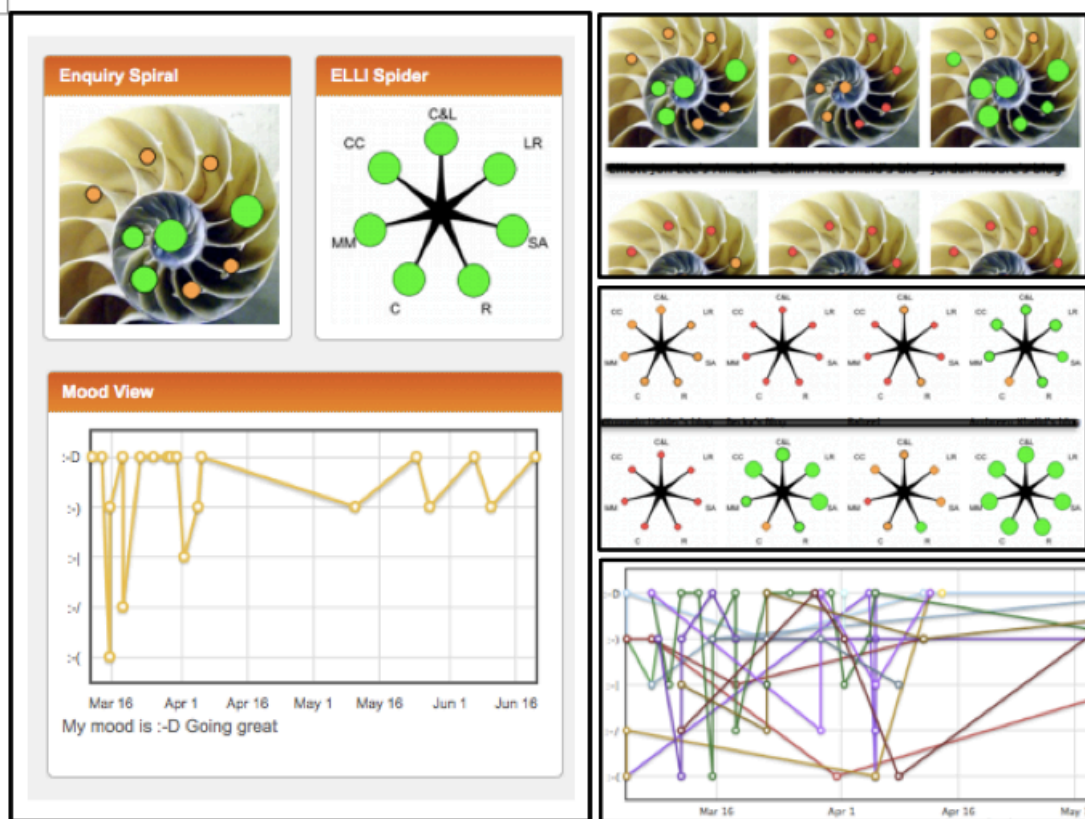


Figure 1: Pupil's view of EnquiryBlogger plug-ins (left) set alongside sections of the teacher's dashboard view of class plug-ins (right)

Figure 1 shows a pupil's view of the EnquiryBlogger plug-ins (left) and a section of the teacher's dashboard view of class plug-ins (right). On the EnquirySpiral and the ELLI Spider, red dots mark a tag that has not been used at all, amber signals limited use of a tag, green indicates a tag that has been assigned to several posts and large green dots represent

extensive use of a tag. The pupil on the left of Figure 2, for example, has indicated a good start to their enquiry, with some progress made on all stages. This pupil appears to have reflected on all their learning dispositions on many occasions (though the teacher might want to check that this is focused reflection and not just indiscriminate use of a set of tags). The pupil has also recorded on 16 occasions that they are happy with the progress of their enquiry, particularly since the end of March.

The teacher's view on the right shows some of the variety within the class. The dashboard provides opportunities to initiate reflective discussion with individual pupils and with the class as a whole, as well as supporting reflection by the teacher (for example, why did several pupils consider that their enquiry was going badly during the first week of April?)

Feedback and future development

One secondary school class has been using EnquiryBlogger since March 2011, and users have been encouraged to provide feedback both through interviews and through their blogs. This feedback is being used to guide the next phase of development. No systematic analysis of feedback has yet been carried out, but sample comments taken from the blogs demonstrate that these tools are being used to support individual and collective reflection.

Learner A: In todays lesson i am going to give enquiryblogger a well deserved 10 on 10 because i think it is a great way to express your lerning and it is it gives you a chance to show your learning to your freinds and family(etc) also it is a great way to express your feelings on how ypu felt doing the chalenges.

Learner B: I would give enquiry blogger a rating of 8/10 because it was like my own, kind of a, diary which people could comment on to give me some ideas.

Learner C: I would give enquiry blogger 8/10 for helping me with my learning because I think that it's good for storing your information and for reflecting on your learning but sometimes it gets you very distracted with all the fonts and making posts that are pointless instead of finding new information. I think that the uploading the videos, recordings and pictures are good but they are quite hard to use as there are no instructions I think that if they put instructions on it would make it even better.

Learner D: i will give enquiryblogger a 7 out of 10. i am giving it a seven because you can store all of your learning on it and it is better than writing. also if you are at home you can look at other people's blogs. people comment on your blog so they can tell you what to do or how to improve your learning and sometimes they tell you what you are doing wrong. . the problem is if you are trying to go on somebodys blog and you dont know how to spell their name then you cant see their blog. there should be a list of all the people on enquiryblogger

Phase 2 of EnquiryBlogger will address the problems and issues raised by learners and teachers and will increase opportunities to develop awareness of the experiences of others by providing easy access to the non-private postings of other class members. It will also

allow groups of learners to make their own selection from a set of plug-ins, to customize their plug-ins and to change the appearance of those plug-ins.

Challenges arising from this research

EnquiryBlogger forms part of a set of ongoing work related to the rapidly growing field of learning analytics – the collection, analysis and reporting of data about learning in order to support and enhance learning experiences and the success of learners (Buckingham Shum & Ferguson, 2011). In this context, research challenges for the future include:

- How can we improve the clarity of data visualisations in order to support reflection by individuals and by groups of learners?
- How can we extend the use of similar tools to different groups and contexts?
- Is it possible to use data analytics from tools like these to provide learners with targeted recommendations that could support their learning?

Acknowledgment

Our thanks to Learning Futures, which funded The Open University and the University of Bristol to develop EnquiryBlogger to support enquiry-based learning.

Bibliography

- Buckingham Shum, S., & Ferguson, R. (2011). *Social Learning Analytics: Technical Report KMI-11-01*. Milton Keynes: Knowledge Media Institute, The Open University, UK.
- Burgess, J. (2006). Blogging to learn, learning to blog. In A. Bruns & J. Jacobs (Eds.), *Uses of blogs* (pp. 105-114). New York: Peter Lang.
- Deakin Crick, R. (2007). Learning how to learn: the dynamic assessment of learning power. *The Curriculum Journal*, 18(2), 135-153.
- Deakin Crick, R. (2009). Inquiry-based learning: reconciling the personal with the public in a democratic and archaeological pedagogy. *Curriculum Journal*, 20(1), 73-92.
- Deakin Crick, R., Broadfoot, P., & Claxton, G. (2004). Developing an effective lifelong learning inventory: the ELLI project. *Assessment in Education: Principles, Policy & Practice*, 11(3), 247-272.
- Du, H. S., & Wagner, C. (2005). *Learning with weblogs: an empirical investigation*. Paper presented at the 38th international conference on system sciences, Hawaii.
- Efimova, L., Fiedler, S., Verwijs, C., & Boyd, A. (2004, 6 Feb 2007). *Legitimised theft: distributed apprenticeship in weblog networks*. Paper presented at the I-know 04, Graz, Austria.
- Ferguson, R., Clough, G., & Hosein, A. (2007). Postgraduate blogs: beyond the ordinary research journal. In S. Wheeler & N. Whitton (Eds.), *Proceedings of the 14th Association for Learning Technology Conference (ALT-C 2007) Beyond Control: Learning Technology for the Social Network Generation* (pp. 179-189).
- Mortensen, T., & Walker, J. (2002). Blogging thoughts: personal publication as an online research tool. Retrieved 6 Feb 2007, 2007, from <http://www.intermedia.uio.no/konferanser/skikt-02/docs/Researching ICTs in context-Ch11-Mortensen-Walker.pdf>