

---

# Nested Narratives: interfaces for tacit sensemaking.

## First Author

Roy Williams  
Dept. Mathematics  
University of Portsmouth  
PO1 3HF  
Portsmouth, UK.  
[Roy.williams@port.ac.uk](mailto:Roy.williams@port.ac.uk)

## Abstract

This paper reports on research on the design, development and use of interactive facilitation and multimedia interfaces, to enable personal sensemaking and reflection. This sensemaking includes how you learn, and how you become a practitioner or professional in your field. It is driven by your own 'voice', agenda, timeframe, and sensemaking gestalt. It yields rich descriptions and texts, particularly on tacit knowledge and

understanding, for research as well as for further collaborative sensemaking.

## Keywords

Narrative, sensemaking, gestalt, voice, tacit knowledge, articulation, exploration.

## ACM Classification Keywords

H. Information systems; H5 Information interfaces and presentation; H5.2 User Interfaces; Subjects: Graphical user interfaces (GUI).

## General Terms

Enabling, sensemaking, narratives.

## Introduction

This paper describes the research, development and implementation of a method of facilitation for user-generated sensemaking using a multimedia interactive interface to capture narratives of learning and emerging identity.

A considerable body of research [1] has been built up on student experience, sensemaking, kinaesthetic media (both multi-touch tables, and mobile iPhones), ePortfolios, and reflective practice in Professional Development. This touches on issues of widening

---

Copyright is held by the author/owner(s).

*CHI 2010*, April 10–15, 2010, Atlanta, Georgia, USA.

ACM 978-1-60558-930-5/10/04.

participation, employability, workplace learning, and 'work-integrated learning'. Quite a bit of this work includes the development and application of interactive media, and 'web2' applications, which are now becoming integral parts of everyday life. Kinaesthetic (touch screen) mobile media, such as web-enabled iPhones are, for instance, fast becoming the new 'norm' in personal communication.

There are, however, limitations. Much of the work on learner experience is confined to formal education, or workbased learning, and there is little that deals with the transitions, conflicts, and links between the two. *ePortfolios* were questioned by several of the keynote speakers at the recent *Eifel* conference, the London Learning Forum 2009, for being too 'instrumental', i.e. limiting reflection to 'instrumental' reflection, i.e., reflection on the efficiency of achieving predetermined learning outcomes, instead of also broadening it out to include issues of context, strategy, personal identity, and communities of practice.

In short, reflection is being confined to the particular, discrete, needs and requirements of separate institutions, to the detriment of reflection on people's own learning paths, and their own emerging identities, which need to integrate and accommodate all of these factors. Learning to learn is widely recognized as a key skill, but it rarely includes learning to reflect on, understand and integrate all of these competing aspects of living and working in a complex global society and economy.

### **The Methodology [2]**

The Nested Narratives approach builds on all of this work, but also goes beyond it, by responding to these

challenges, and extending the boundaries of personal, interactive and collaborative reflection. It does so by creating an interactive and enabling environment and interface for personal sense-making, in the person's own voice and images, and on their own terms. This is based on the research done in the *Affordances for Learning* project [3], for the Higher Education Academy (UK).

Personal sense-making creates rich descriptions and resources on tacit understandings, both for research and to act as unique exemplars of sense-making for others. It is based on nested narratives, which enable the person to explore and articulate tacit understandings of their learning and emerging identities, which are negotiated as they learn to become part of, and members of a range of communities, (e.g. educational, work-place and social). These communities often have conflicting perspectives, values, and requirements.

We know from existing research and practice (in BNIM: Biographical Narrative Interview Method, and in A4L: The Affordances for Learning Research Project) that new modes of reflection, in 'nested narrative' conversations, as well as in interactive interfaces (ref), enable people to explore and articulate tacit understandings of the full complexity of their personal learning, contexts, and emerging identities, particularly if this is done largely in 'intuitive' media (such as audio and graphics, rather than text), in their own voice, with their own images, and on their own terms [4].

## Research Questions

The key research questions addressed in the Nested Narratives approach are:

1. Can we extend the boundaries of the ways people explore tacit understandings of their learning and emerging identities, and articulate and represent this in rich, interactive, multimedia narratives? And can we extend this personal sensemaking into collaborative sensemaking with others?
2. Can we establish the application of these new affordances across formal education, open learning networks, community work, performing arts, public and private sector employment, professional development, and historical and contemporary heritage?
3. Can the new, 'Web2' social, multimodal, and kinaesthetic media and networks help us to do so, and can we develop, test and apply the necessary tools and facilities to enable this to happen?
4. Can we use these narratives to build up resources for wider use, for research, for social and historical documentaries, and to serve as exemplars of practice for other people?

The answer to all of these questions is, in general terms, positive. Further research and development is currently underway to extend the research, and the enabling and facilitating interface for Nested Narrative sensemaking.

## Conclusion

Open, gestalt, facilitated sense making, on the learner's own terms, provides multiple layers of information in rich, complex, multi-modal metaphors, not just on the 'content' of learning experience, but also the complex affective 'substance' of learning experience: i.e. the way in which they, as emergent 'learners' and aspirant

'professional graduates' cope with pressures on their confidence, identity and selves, as learners and as people. As academics we need to be 'retrained' or 'untrained' to be able to hear all of this. One of the crucial first steps, for the researcher or the tutor is literally to listen – to discard the transcripts of the story telling, or the 'student feedback' forms, and listen, directly, to the student's stories in their own voice, in which the richness of all of these aspects is integrated and embodied, and cannot easily be analysed and sifted through to select just the content from the written or (even worse) printed, cold, text. A crucial part of that 'listening' is to take figures of speech and metaphors seriously. Within an epistemology and ontology that acknowledges the central role of synaesthesia in language and sense making, metaphors are seldom 'just' figures of speech; they provide many more layers of rich, empirical information.

The audio stories, preferably with the students' own associated graphics and illustrations, embody rich narratives that provide us with unique access to knowledge of actual learner experience of learning/identity, and information about which aspects of what we provide for learners are, in fact, affordances or, on the contrary, de-fordances, and which aspects enable or are obstacles for negotiating the many transitions that they have to face.

We started this project from an interest in student learning research, by researching the way learners use resources, facilities, events and interactions with people, across formal and informal contexts. In our attempts to develop a methodology that would enable us to a) document and research how learners make sense of their learning, and b) to explore the degree of alignment between the designers, the providers and the learners, we created a methodology and an interactive interface which provides a facility for sense making, based directly on the rich, empirical descriptions of the narratives of how learners negotiate and experience learning/identity. The value of the interface [4] is

based on the way it captures and provides direct access to the intuitive nature of the learners' *voice* and associated multimedia, in which they explore their own narratives about 'something that was important to them in their learning'.

### **Citations**

- [1] Mayes, T. (2006) LEX Methodology Report. Last accessed 05 Jan 2010 at:  
[http://www.jisc.ac.uk/media/documents/programmes/elearningpedagogy/lex\\_method\\_final.pdf](http://www.jisc.ac.uk/media/documents/programmes/elearningpedagogy/lex_method_final.pdf)
- [2] Williams, R.T. et al (2009) Nested Narratives, *Brookes Journal of eLearning and Teaching*, 2:4, March 2009. Last accessed 05 Jan 2010, at:  
[http://bejlt.brookes.ac.uk/article/nested\\_narratives\\_enabling\\_students\\_to\\_make\\_sense\\_of\\_their\\_learning/](http://bejlt.brookes.ac.uk/article/nested_narratives_enabling_students_to_make_sense_of_their_learning/)
- [3] Williams, R.T. et al (2009) *Affordances for Learning*, Project report for the Higher Education Academy, UK. Last accessed 05 Jan 2010, at: <http://learning-affordances.wikispaces.com/Project+Report>
- [4] Williams, R.T. and Karousou, R. (2009) *Beyond Text: Interactive and Collaborative Reflective Practice*. Diverse 2009 Conference, Aberystwyth, Wales, UK. Last accessed on 05 Jan 2010, at:  
<http://www.aber.ac.uk/diverse/williams.htm>