

# Students as Designers of their own Learning Technologies

Katy Jordan<sup>1</sup>, Fran Tracy<sup>1</sup> and Patrick Carmichael<sup>2</sup>

<sup>1</sup>*Centre for Applied Research in Educational Technologies, University of Cambridge;*

<sup>2</sup>*Faculty of Education, Community and Leisure, Liverpool John Moores University*

## ABSTRACT

It has been argued that student expectations of learning technologies in higher education have been raised by their exposure to Web 2.0 applications, social software and mobile devices, and that institutional offerings fail to meet these expectations. One response to this is to involve students in the design, development and evaluation of educational software and learning environments. However, there has been considerable discussion of the extent to which 'users' of educational software should be involved in its design and development.

Olsson (2004) presents a synthesis of different models of user participation in design and development processes ranging from those in which 'users' are simply sources of information to those in which they are co-designers and developers. In this paper, we review our experiences of working with students in a range of design and development projects as part of the 'Ensemble: Semantic Technologies for the Enhancement of Case-Based Learning' project began in October 2008. We present several scenarios ranging from 'designing-for-users' to involving 'users-as-designers', and relate these to Olsson's categorizations. We discuss the issues that arose in these different settings, including the particular kinds of insights and understandings contributed by students and how their involvement raised new methodological and ethical issues.

We highlight how the availability of appropriate software development environments and toolkits (such as the 'Exhibit' web application framework developed by the SIMILE project at MIT) can reduce the barriers to the involvement of 'users-as-designers' and even 'users-as-developers'. Appropriate technologies, training and support can allow students to master the technical development skills required and to apply the affordances of the technology to their own domain knowledge, taking on the role of 'bricoleurs' (Ciborra, 1992).

At the same time, the experience of student designers shows how the 'participatory' involves not only the representation of a particular perspective in a collaborative process, but also a trajectory of 'becoming' that changes the participant and presents them with new experiences and challenges. Students who became engaged in the project may have started from their own experience - designing 'for themselves', but were then engaged in a generalising transformation by which they became designers 'for others'. In Olsson's terms they became very well-informed generators of learner personas - informed by reflection on personal learning but engaging in broader, discursive construction of an 'ideal learner'.

In conclusion, we draw on students' own accounts of the complex processes of identity change undergone by participants in the process, with students beginning as 'expert learners' and through their involvement in the process undergoing a transition into designers. We consider patterns of participation and personal development in terms of a 'culture of inquiry' (Hall, 1999) which explores not only the development of learning technologies or pedagogical practice but also develops an account of learner identities in transition (Carmichael, 2010).

## REFERENCES

- Carmichael, P (2010 forthcoming) "Cultures of Inquiry in Technology Enhanced Learning and Beyond" *International Review of Qualitative Research*
- Ciborra, C. (1992) "From Thinking to Tinkering: The Grassroots of Strategic Information Systems", *Information Society*, 8 (4), p. 297.
- Hall, J. (1999) *Cultures of inquiry: From epistemology to discourse in sociocultural research* (Cambridge: Cambridge University Press).
- Olsson, E. (2004) What active users and designers contribute in the design process *Interacting with Computers* 16 pp.377-401